

YOUR GUIDE TO THE FACTS & FIGURES OF THE U.S. NAVY

ALL HANDS

MAGAZINE OF THE U.S. NAVY

JANUARY 2000



WEBWISE • YEAR IN REVIEW • PAY CHART • SQUADRONS

CARRIERS • SHIPS • SUBMARINES • WEAPONS

2000

OWNER'S AND OPERATOR'S MANUAL 2000

January

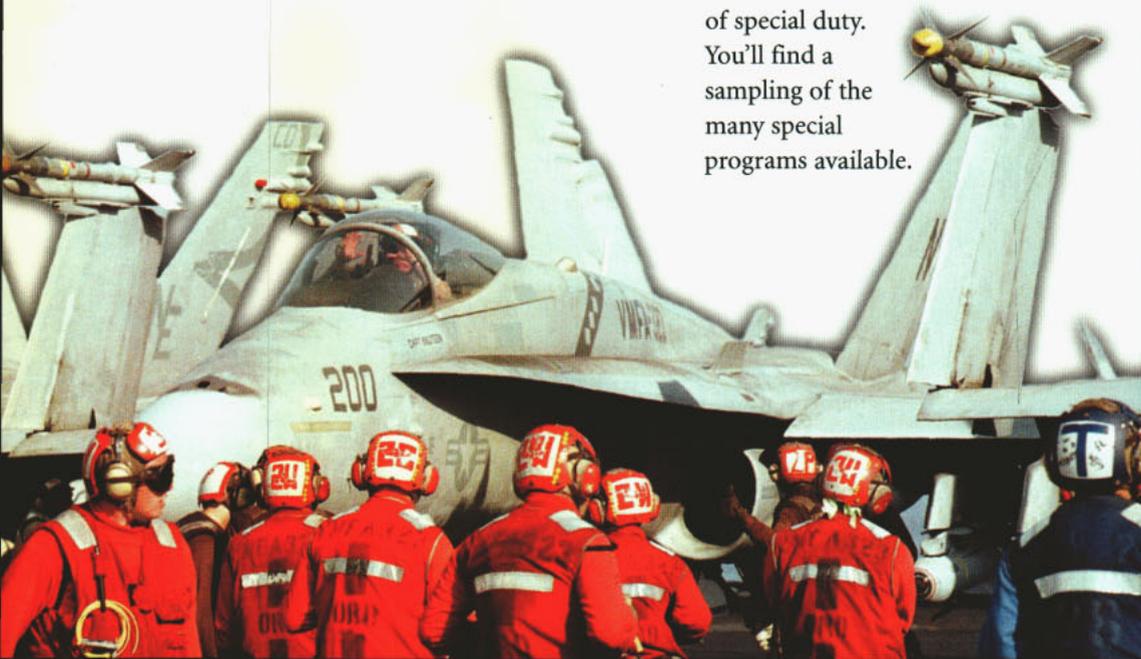
Owner's and Operator's Manual 2000

2 Message from the Secretary
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4 Year in Review
All Hands looks at what we did this year through the eyes of our Navy photographer's mates.

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On the Cover
Lone Sailor © Statue by Stanley Bleifeld
Navy Memorial Foundation, Washington, D.C.

Photo by JO1 Robert Benson

All HANDS

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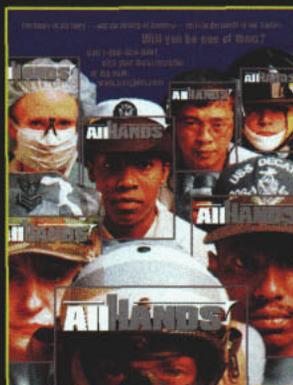
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CHECK IT OUT!

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On the Back Cover

"Will you be one of them?"
The future of the Navy photo collage.

Photo by PH2 Aaron Ansarov

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Ever wonder what a Sailor does for a living? Then check out their crow.

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Special Pull-out Warfare Pins and Badges & Order of Precedence

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31 Naval Reserve Activities

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The "silent service" is everywhere.

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42 Navy Aircraft

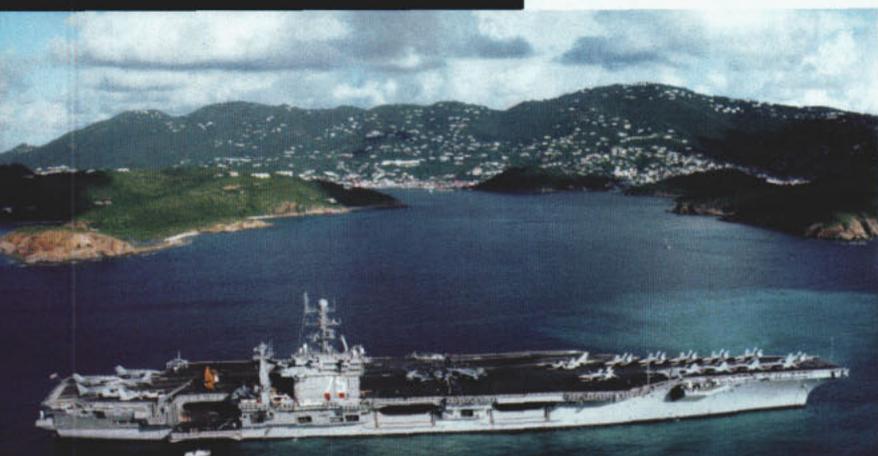
Whether on board one of the Navy's 12 carriers or at a shore facility, U.S. Navy aircraft remain the best in the world.

48 Navy Weapons

The Navy uses a wide variety of modern weapons and weapon systems. Today's Sailors are using cutting-edge technology to put ordnance on target.

56 Monthly Basic Pay Table

Check out our pay chart and see what this year's pay raise means to you.



Check us out Online at:

www.mediacen.navy.mil



Vision 2000



Officers and Sailors from the aircraft carrier USS *Kitty Hawk* (CV 63), and the aircraft carrier USS *Independence* (CV 62), cross decks to their new homes. Following the turnover with *Independence*, *Kitty Hawk* took her place in Yokusuka, Japan.

Photo by PH1 Spike Call

Letter from the Secretary of the Navy



For more than 224 years, the U.S. Navy has promoted security and stability around the world. Together with the Marine Corps, we have been “always there ...for America.” This year’s “Owner’s and Operator’s Manual” helps to explain how we remain ready to do that; to be there for whatever we are asked to do — ultimately, to fight and win.

Throughout this past year our great Navy, together with the Marine Corps and our sister services, has answered the call again and again, while forward deployed around the world in support of U.S. national security objectives. Whether conducting successful combat operations in Kosovo and Iraq, or complex humanitarian operations in the wake of natural disasters; whether supporting our friends and allies in joint and combined exercises, or responding with dazzling accuracy to counter terrorists even deep within land-locked areas; it is our amazing Sailors, together with leading-edge technology and an effective strategy, that make things happen with unquestioned success.

As we enter the next century, we foresee many new security challenges, and we know there will be others that we cannot foresee. The Navy’s task will be to remain ready in the face of those challenges. During the past year, we have begun to secure that future, in many ways, aiming to transform this great institution and the Sailors who will lead it.

Tomorrow’s Sailor will harness and use remarkable technologies that we are now developing. F/A-18 E/F *Super Hornets* and *Joint Strike Fighters* will fly from the decks of the next generation aircraft carriers. The DD 21 land attack destroyer will support carrier battle groups, and provide littoral warfare capabilities and fire support for our amphibious ready groups with tremendous precision. *Virginia-Class* submarines will have great intelligence and land attack capabilities. Communications networks will tie combat capabilities together and enable

our forces to achieve a new level of battle space dominance.

Even with advanced capabilities, the single most important factor for the continued success of our Navy remains the Sailor. Today’s Sailor is versatile and creative, with the same qualities of honor, courage and commitment that are the hallmarks of our Navy. Sailors work hard, accept huge responsibilities and expect success, both personally and professionally. They develop and lead others. And whether they invest a career or just one tour of duty, the Navy experience stays with them forever.

We are building Sailors for the next millennium — technologically savvy, highly motivated, and prepared to meet the challenges of the future. We are focused on recruiting and retaining the highest quality men and women, giving them the tools and the opportunities to succeed. The Navy is right now transforming what it means to serve this Nation, in the exciting times ahead. As a result, I have every confidence that the Navy will remain “always there” for America in the 21st century.

This edition of *All Hands* is loaded with information about the people, the technology, and the programs that define the Navy of today, and tomorrow. I think you’ll find it informative and interesting. My hope is that it will inspire you to take the time to express your interest and appreciation for your Navy — and your Sailors — in the year ahead.

Richard Danzig
Secretary of the Navy

Year in Review

Photo by PH2 Michael W. Pendergrass



Left: On board USS *Enterprise* (CVN 65), crewmen prepare to launch the fourth wave of air strikes against Iraq in support of Operation *Desert Fox*.

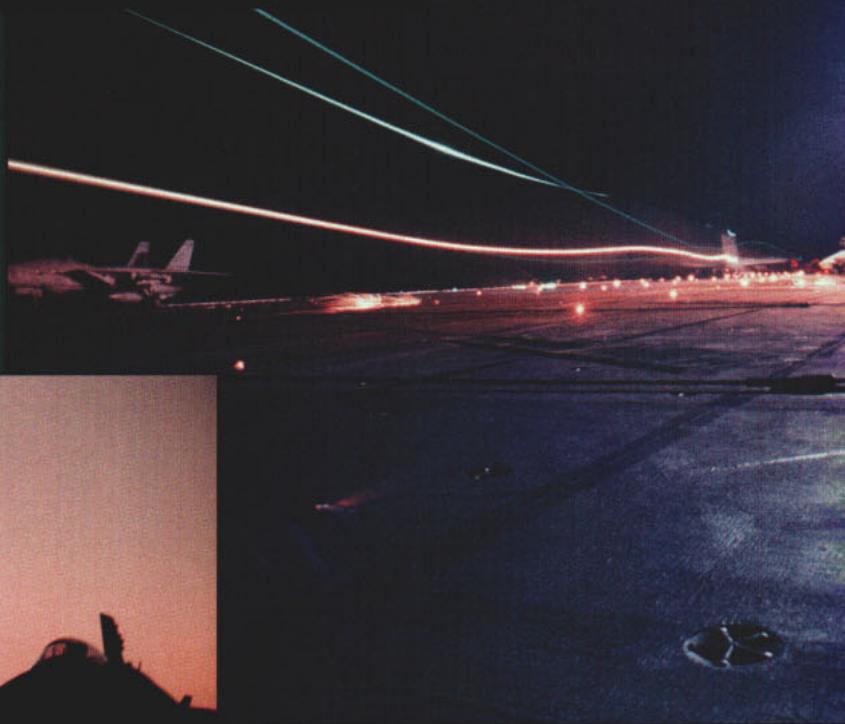
Operation Desert Fox December 1998

Below: The sun sets over the flight deck of USS *Enterprise* (CVN 65) as crewmen prepare to launch the fourth wave of air strikes against Iraq in support of Operation *Desert Fox*.

Photo by PH2 Michael W. Pendergrass



Photo by PH2 Michael W. Pendergrass



Above: A strike aircraft returning from the fourth and final wave of air strikes against Iraq in support of Operation *Desert Fox* leaves a trail of light as it lands on the flight deck of USS *Enterprise* (CVN 65).

Photo by PH3 Shelton T. Young



Left: An F/A-18 *Hornet* taxis onto the catapult aboard USS *Enterprise* (CVN 65) prior to launch.

Below: A Navy SH-60 *Seahawk* launches a Hellfire missile during live-fire exercises near San Clemente Island off the coast of California.

January 1999



Photo by PH2 Jeffrey S. Vance



February 1999

Photo by PH2 Benjamin A. Lewis

Right: AN Jess Peterson, a USS *Essex* (LHD 2) crash and salvage crew member, helps a young student with hose handling techniques during a ship visit.



Above: Air traffic controllers monitor aircraft launched from USS *Theodore Roosevelt* (CVN 71) during strike operations. *Theodore Roosevelt* and her embarked carrier airwing participated in air strikes against the former Yugoslavia in support of NATO's Operation *Allied Force*.



Photo by PH3 William L. Vandermate

Operation Allied Force March 1999

Left: An SH-60 Seahawk from Helicopter Anti-Submarine Squadron (HS) 3 lifts a string of Explosive Ordnance Disposal (EOD) Technicians during special insertion and extraction (SPIE) training on board USS *Theodore Roosevelt* (CVN 71). *Roosevelt* and her embarked carrier air wing participated in strike missions against the former Yugoslavia in support of NATO's Operation *Allied Force*.

Photo by PH3 Denise McKisic

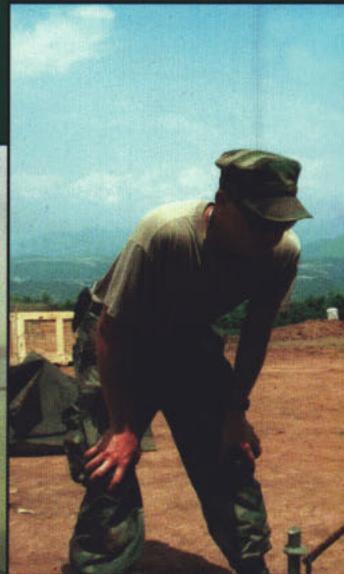
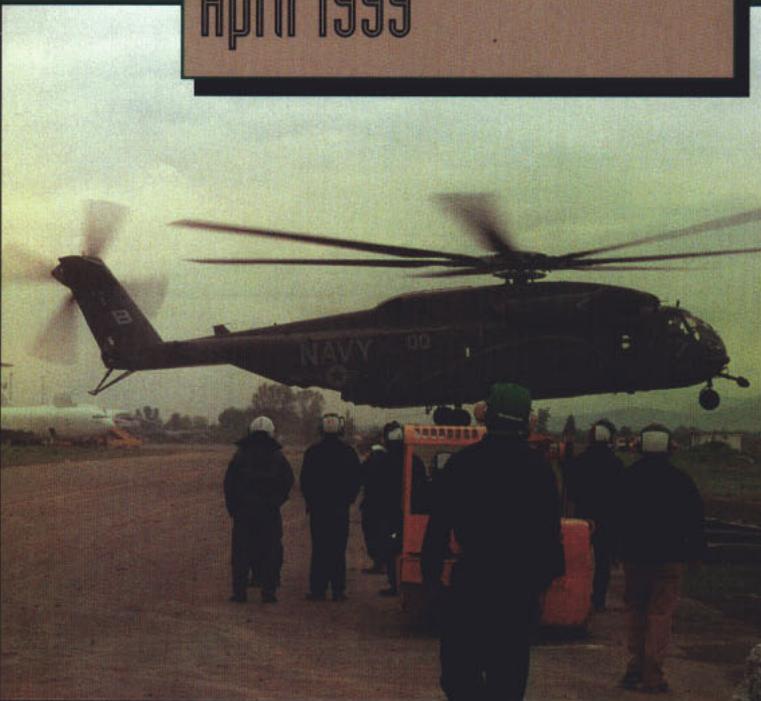


Above: An Air Cushion Landing Craft (LCAC) moves onto the beach at Lithoro, Greece, carrying equipment for the 26th Marine Expeditionary Unit (MEU). The first wave of Marines assigned to the 26th MEU arrived ashore in Lithoro during the early-morning hours in support of the NATO Peacekeeping Mission in Kosovo.

Operation Shining Hope April 1999

Right: Sailors from Helicopter Mine Counter Measure Squadron (HM) 15 load a pallet on one of their MH-53 Sea Dragons. HM-15 was embarked on the mine counter measure ship USS *Inchon* (MCS 12) operating in the Mediterranean and Adriatic Seas in support of the NATO-led Operation *Shining Hope*.

Photo by PH4 Brian McFadden



May 1999

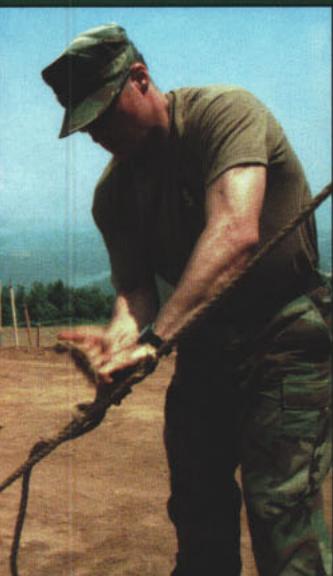
Photo by PH2S Terry A. Cosgrove



Above: Newly-commissioned naval officers show their excitement after being sworn into the Navy by Chief of Naval Operations ADM Jay L. Johnson. Of the 868 members of the Naval Academy's Class of 1999, 598 of them joined the surface Navy.

Below: BU2 Jason Freeman from Oxnard, Calif., shows SWCA Jason Krueger from Chesterfield, Mich., how to tie off the rope to the circus tent that will be used for a dining facility at Camp Wedge, Naval Mobile Construction Battalion (NMCB) 4's forward operating base in Albania. NMCB 4 worked on 25 miles of roadwork near Kukes, Albania, in support of Operation *Shining Hope*.

Photo by PH2 Brian McFadden



Below: CDR Philip G. Beierl, commanding officer of Mobile Diving and Salvage Unit 2, inspects an artifact found after a mixed gas dive on the sunken Civil War ship *Monitor* from USS *Grasp* (ARS 51), 16 miles off Cape Hatteras, N.C.

Photo by PH1 Eric J. Tiller



Below: ABH1 Earle Smith from Virginia Beach, Va., waves off a helicopter to allow flight deck crews time to rearrange other aircraft aboard USS *Bataan* (LHD 5). *Bataan's* Amphibious Ready Group and 22nd Marine Expeditionary Unit (MEU) were underway for an MEU exercise in preparation for a six-month deployment to the Mediterranean Sea.

June 1999



Photo by PH3 Christopher M. Staten

Photo by PH3 John Logrande



Below: A pilot and radar intercept officer of a U.S. Navy F-14A *Tomcat* attached to Air Test and Evaluation Squadron (VX) 9 conduct an in-flight refueling with a U.S. Air Force KC-10A Extender attached to the 60th Air Mobility Wing, Travis Air Force Base, Calif.



Above: Sailors aboard amphibious assault ship USS *Peleliu* (LHA 5) work hard to guide a fuel probe during an underway replenishment with USCGC *Midgett*.

Right: LT Wendy R. Regal, a doctor with Marine Expeditionary Unit (MEU) Service Support Group, examines a Turkish patient. During a two-day Medical/Dental Civil Affairs Program the medical staff treated more than 300 people. USS *Kearsarge* (LHD 3) and the 26th MEU provided care to the Turkish earthquake victims.

Below: The view from a CH-46E *Sea Knight* helicopter shows the destruction caused by the massive earthquake which struck Turkey. The Marines arrived off the Turkish Coast and provided relief efforts in conjunction with the government of Turkey.



Photo courtesy of Marine Corps Cpl. Jimmie Perkins

Photo by U.S. Marine Corps Lance Cpl. Richard T. O'Connor



Operation Avid Response August 1999

Operation Southern Watch September 1999

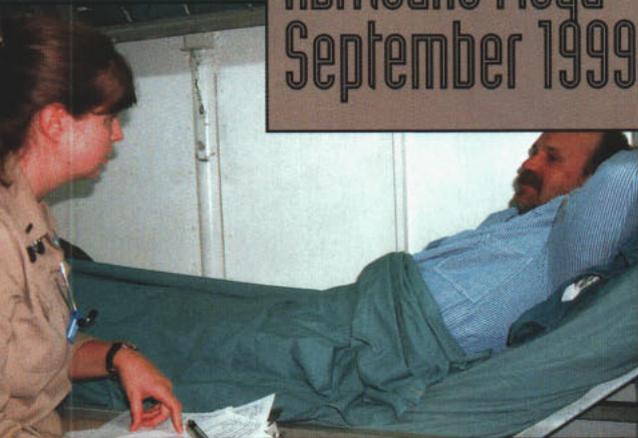


Above: EM1 Ron Cunningham, a Naval Reservist from Mulberry, Fla., monitors an electrical switchboard that controls various equipment through out USS Constellation (CV 64) in support of Operation *Southern Watch*.



Above: VRC-30 "Providers" air-wing members AM2 Gina Lee, AM3 Vicki Barnowski, ADAN Karen Welch and AD3 Jennifer Welch perform maintenance on a C-2A *Greyhound* aboard USS *Constellation* (CV 64) in support of Operation *Southern Watch*.

Hurricane Floyd September 1999



Above: Navy LTJG Santana, assigned to the medical department aboard USS *John F. Kennedy*, monitors the condition of David Lytle, one of eight crew members rescued at sea after abandoning their ocean tug *Gulf Majesty* in heavy seas off the coast of Florida.

Below: Crew members from the ill-fated ocean tug *Gulf Majesty* exit an SH-60 rescue helicopter assigned to Helicopter Support Squadron (HS) 11 following their rescue at sea. Eight crew members were rescued and brought aboard USS *John F. Kennedy* (CV 67) for medical evaluation.



East Timor October 1999

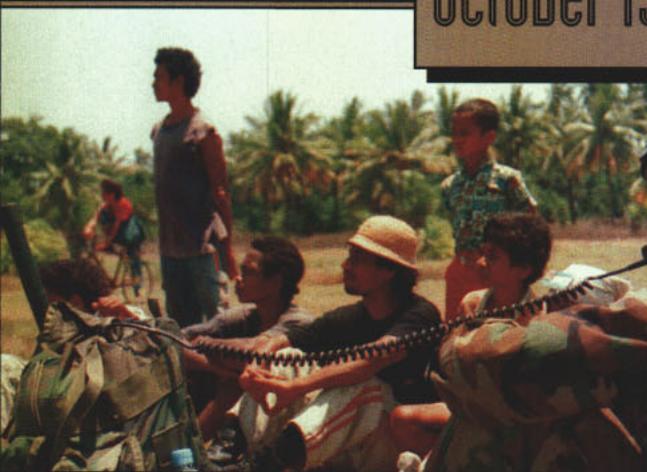


Photo by Marine Corps Capt. Kristen A. Lancia

Above: Lance Corporal Alonzo D. Jenkins Jr., a radio operator with the 31st Marine Expeditionary Unit (MEU) Special Operations Capable (SOC), keeps up communications with CH-53E helicopter pilots during a heavy-lift operation at the New Zealand Army-controlled airport near Suai, East Timor.



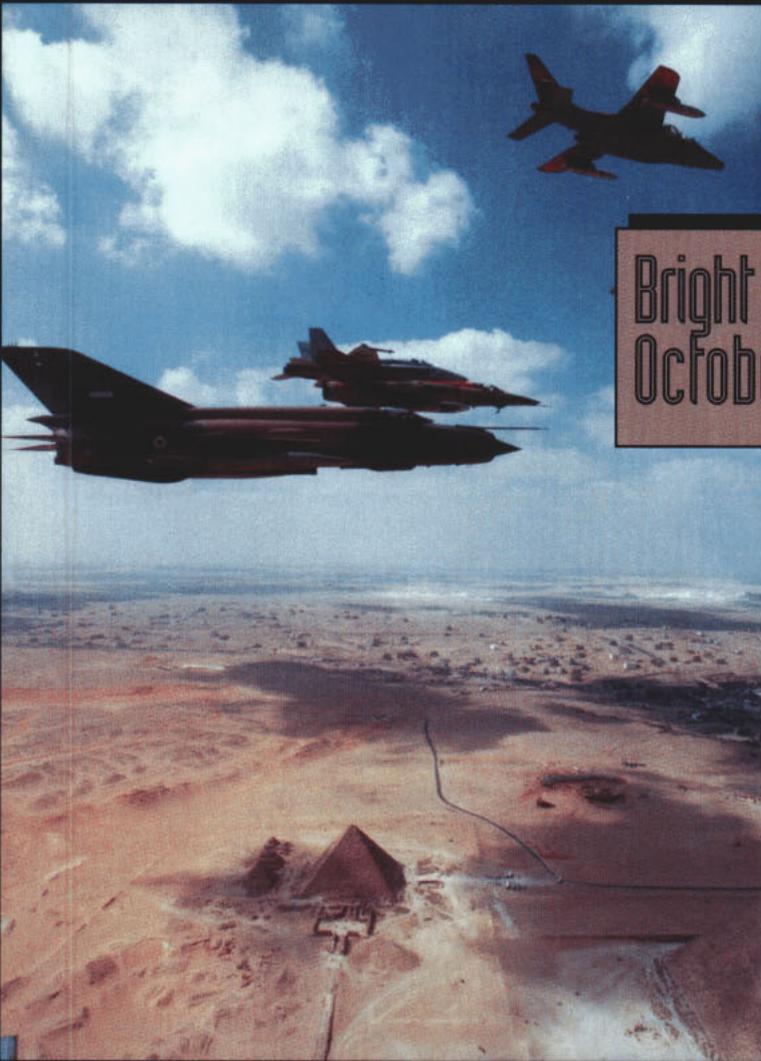
Photo by SGT Bryce R. Piper

A CH-53E "Super Stallion" helicopter flies near the 27-meter high statue of Jesus Christ while ships of International Forces in East Timor patrol the waters of the Timor Sea.

Photo by PH2 Shawn Eklund



Left: AMAN Bryan Fitzcharles, from Downingtown, Pa., shows AN Dwayne Hertzog, from Morgantown, W.Va., a scratch on a glass canopy during a turnaround inspection on an F/A-18 *Hornet* from Strike Fighter Squadron (VFA) 81 aboard USS *Dwight D. Eisenhower* (CVN 69).



Bright Star October 1999



Photo by LTJG John DeFries

Left and Above: A multi-national flight formation conducts training flights over the pyramids in Egypt during *Bright Star*.

November 1999



Photo by PH2 Shawn Edmund

Left: AOAN Richard Delgado from Maui, Hawaii, installs a fin on a High Speed Anti Radar Missile (HGM-88) during a weapons upload aboard USS *Dwight D. Eisenhower* (CVN 69).

Special

Duty

U.S. Navy Photo



More Than a Job

The complexity of the Navy requires a broad range of Sailors trained in very technical and demanding areas. However, the ever-changing needs of such a large and sophisticated organization cannot be met by constantly adding or eliminating rating groups. To deal with this, the Navy offers Sailors a variety of special programs to meet the needs of the service, as well as providing a break from normal assignments.

Navy Food Management Teams (ENLTRANSMAN 9.02):

Navy Food Management Teams provide technical and management assistance to mess management specialists in the operation of enlisted messing facilities and afloat officer messing facilities with on the job instruction in areas of food preparation and service, mess management and sanitation. Their mission is to assist both fleet units and shore activities in the improvement of food service operations staffed with Navy mess management specialists. These teams are located at Norfolk; Charleston, S.C.; Mayport, Fla.; San Diego; and Pearl Harbor. Ratings: MS (E-7 to E-9)

Navy Music Program (MU) (ENLTRANSMAN 9.27):

The Navy Music Program is comprised of men and women who possess musical skills in varying styles, to include martial, classical, jazz, rock and country/western. All applicants must audition prior to requesting conversion. Approval/disapproval is determined by "Special Assistant for Music (PERS-6MM)." Due to fluctuating NEC manning requirements, contact with local band directors or the MU detailers is recommended. Ratings: All, but must pass strict auditioning process.

Navy Manpower Analysis Center (NAVMAC) [ENLTRANSMAN 9.28]:

NAVMAC Manpower Analysis conducts detailed analyses of workload, manning standards and mission statements to determine optimum levels of manpower required for units to meet their respective wartime missions. Duties include conducting extensive on-site surveys of workloads on ships, staffs and aviation squadrons and using collected data to develop ship, squadron or fleet manpower documents. Ratings: AB, AD, AE, AK, AM, AT, AV, AZ, BM, BT, CT, DK, DP, DS, EM, EN, ET, FC, GM, GS, HM, HT, IC, IS, MM, MS, OS, PN, RM, SH, SK, STG, STS, WT and YN.



Deep Sea Diver Program [ENLTRANSMAN 9.12]:

Deep sea divers plan, supervise and execute salvage, repair and rescue diving operations for various periods of time depending upon the individual's degree of qualification. They are responsible for the maintenance and safe operation of diving equipment and tools. Ratings: Various.



U.S. Navy Flight Demonstration Squadron (BLUE ANGELS) [ENLTRANSMAN 9.18]:



The Blue Angels perform at events around the United States and the world. Only the best are selected to maintain the high performance F/A-18 *Hornet* and provide administrative and logistic support for this world-renowned squadron. Ratings: AD, AE, AK, AME, AMH, AMS, AO, AS, AT, AZ, DM, JO, PH, PR, YN and Airman (AN).

U.S. Navy Ceremonial Guard [ENLTRANSMAN 9.08]:

The U.S. Navy Ceremonial Guard is the official ceremonial unit of the Navy and as such, is a Presidential Support Activity. The Ceremonial Guard is a component of Naval District Washington (NDW). Non-petty officers are assigned directly from Recruit Training Command. CPOs and petty officers are selected from those eligible for shore duty. Ratings: All ratings.

Advancement Examination and Rate Training Manual Writer (ENLTRANSMAN 9.35):

Advancement Examination and Rate Training Manual writer billets must be filled by E-7 or above. Screening is required to ensure the prospective writer has recent technical experience in the rating. Writers must be mature, stable individuals who are able to function independently, and must demonstrate aptitude for such assignment. Although writers work with civilian education specialists, their writing responsibilities are accomplished independently. Ratings: All (E-7 and above).

Landing Craft, Air Cushion (LCAC) (ENLTRANSMAN 9.48):

The LCAC is a non-self-sustaining, high speed, ship-to-shore, over-the-beach, air-cushioned vehicle (ACV) designed to operate from the well deck of amphibious assault ships. Its primary mission is support of Marine amphibious forces. It is capable of carrying a 60-ton payload at 30 knots in sea state 3. Launched from the well deck of amphibious ships (LSDs, LHAs, LHDs and LPDs), the LCAC can transport equipment, personnel and weapon systems to the beach from over-the-horizon standoff distances. The craft has a crew of five Sailors. The LCAC program includes duty as craft master (NEC 0167), craft engineer (NEC 4131), craft navigator (NEC 0304) loadmaster and deck mechanic (NEC 4133 or 4135). Ratings: Various.

Physical Security-Law Enforcement Specialist (ENLTRANSMAN 9.04):

The Law Enforcement Specialist performs duties in internal security at installations and facilities as a member of the Navy Internal Security Force. Personnel selected for assignment to Physical Security Duty attend the Law Enforcement Specialist Training School and earn the Law Enforcement Specialist NEC 9545. Ratings: All ratings except HM, DT and those serving in pay grades E-7 to E-9.

Command Career Counselor Program (ENLTRANSMAN 9.06):

Command Careers Counselors (CCC) assist commanders and commanding officers with their retention efforts. Sailors filling full-time CCC billets are trained to provide the support required in the Retention Manual. Ratings: All ratings, E-6 and above. Naval Reserve activities may designate an E-5 as long as all other qualifications are met and a qualified E-6 is not available.

Personnel Exchange Program (PEP) (ENLTRANSMAN 9.20):

This program provides the opportunity for U.S. Navy personnel to become an integrated part of a host country's service. The intent of the program is to provide a better understanding and appreciation of our allies, allow foreign nations to become better acquainted with the United States through personal contact, and to provide interesting foreign duty assignments. Language proficiency is required and may involve training at the Defense Language Institute. Nations may include Australia, Belgium, Canada, Italy, Germany, the United Kingdom, Portugal, the Netherlands and Norway. Ratings: Various.

SEAL/UDT (Naval Special Warfare) Program (ENLTRANSMAN 9.10):

The Navy Special Warfare Community includes enlisted personnel qualified for and assigned secondary NECs (SNEC) 5320, 5323, and 5327. Additionally, these personnel carry the enlisted designator (DV) and (PJ). Once qualified, personnel perform Special Warfare Operations as SEAL/UDT Combatant Swimmers. Ratings: A variety of ratings are eligible for applying to the SEAL/UDT program.



Naval Reserve Officer Training Corps (NROTC) (ENLTRANSMAN 9.39):

Personnel selected for duty as instructors at any NROTC must be mature, emotionally stable individuals and must demonstrate aptitude for such an assignment. Ratings: Various.



USS Constitution (ENLTRANSMAN 9.19):

USS *Constitution* is an important part of American heritage and the history of our U.S. Navy. Having earned her nickname "Old Ironsides" during the War of 1812, USS *Constitution* is the oldest commissioned warship afloat in the world. *Constitution* is permanently berthed in Boston. The crew of USS *Constitution* maintains and presents her to approximately 1 million visitors annually. Volunteers seeking duty aboard USS *Constitution* must handle the public with maturity, tact and be a model representative of today's Navy. Ratings: Various.

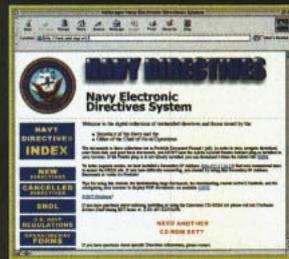
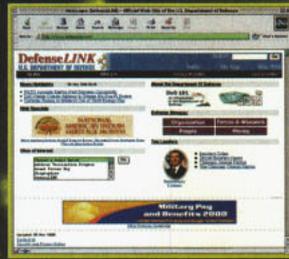
USS Arizona Memorial (ENLTRANSMAN 9.41):

USS *Arizona Memorial* is a premier tourist attraction in Hawaii. More than 1 million visitors annually pay their respects to the ship and her crew. Volunteers seeking duty at the USS *Arizona Memorial* must handle the public with maturity, tact and be a model representative of today's Navy. Non-petty officers (E-3 and below) will preferably have fleet experience, but may be assigned directly from recruit training or academic (non-disciplinary) attrition from Class "A" school. Petty officers should be nominated by sustained superior performance, be eligible for shore duty and preferably be warfare qualified. Ratings: Various.



Photo by JO1 Robert Benson

WEBWISE



Navy (and Navy-related) sites can be extremely useful when Sailors want to expand their knowledge of ships, aircraft and weapons systems as well as those commands and areas of the world where they might be stationed next.

The list presented here is nowhere near comprehensive (that, of course, would be impossible). It is simply meant as a reference to show you what is out there and to help get you started. We've attempted to list sites relating to as many areas of Navy life as possible (and most of them have links to other sites).

The list was accurate at press time. However, site addresses and composition change constantly, so learn to use the various search engines available to find the site (or information) you're looking for.

If you know a site that might be of interest to Sailors and their families, e-mail the URL to CyberSailor at cybersailor@mediacen.navy.mil.

Getting Started

U.S. Navy

(www.navy.mil)

The official Navy website with news, information, images and an overview of the organization, ships, aircraft, etc., of the U.S. Navy.

Navy OnLine

(www.ncts.navy.mil/nol)

One of the best lists of links to Navy sites worldwide.

Navy Jobs

(www.navyjobs.com)

Know someone looking for a Navy career? Here's the place.

Naval Historical Center

(www.history.navy.mil)

The past is present at the Navy's official history site.

Defenselink

(www.defenselink.mil)

Look no further for news and information about DOD.

Publications

Navy Directives

(<http://neds.nebt.daps.mil>)

Get the latest Navy instructions on line.

All Hands

(www.mediacen.navy.mil/pubs/allhands)

The official magazine of the U.S. Navy.

Captain's Call Kit

(www.mediacen.navy.mil/pubs/cck)

A quarterly assortment of "news you can use," policy and program information.

Navy News Service

(www.chinfo.navy.mil/navpalib/news/navnews/www/navnews.html)

The principal news service of the Department of the Navy.

Naval Aviation News

(www.history.navy.mil/branches/nhcorg5.htm)

Get the latest information about the world of naval aviation.

Naval Reservist News

(www.ncts.navy.mil/navresfor/nrn)

An outstanding publication covering the U.S. Naval Reserve.

Organizational

U.S. Pacific Fleet

(www.cpf.navy.mil)

U.S. Atlantic Fleet

(www.atlanticfleet.navy.mil)

U.S. 3rd Fleet

(www.comthirdflt.navy.mil/c3f)

U.S. 7th Fleet

(www.c7f.navy.mil)

Naval Forces, Europe

(www.cne.navy.mil)

Naval Forces, Japan

(www.cnj.navy.mil)

Naval Forces, Marianas

(www.guam.navy.mil)

Naval Forces, Korea

(<http://144.59.63.170>)

Naval Forces, Central Command

(www.centcom.mil)

Major Installations/Regions

SITES (Standard Installation Topic Exchange Service)

(www.dmdc.osd.mil/sites) – One-stop shopping for information on bases around the world. A great resource at PCS time.

District of Columbia

(www.ndw.navy.mil)

Pearl Harbor

(www.hawaii.navy.mil)

Italy

(www.naples.navy.mil)

Rota

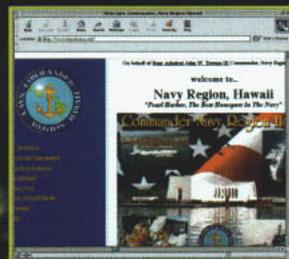
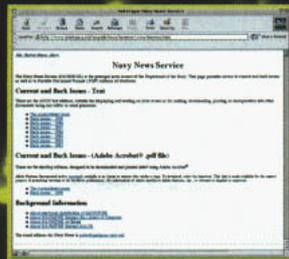
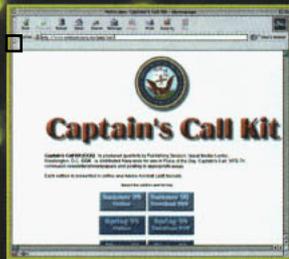
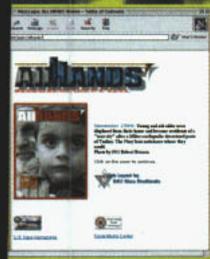
(www.rota.navy.mil)

Yokosuka

(www.yokosuka.navy.mil)

Norfolk

(www.cmar.navy.mil/default.htm)



San Diego

(www.cnbsd.navy.mil)

Pacific Northwest

(www.cnbs.navy.mil)

Surface

Naval Surface Force, Pacific

(www.surfpac.navy.mil)

Naval Surface Force, Atlantic

(www.cnsl.spear.navy.mil)

Naval Vessel Registry

(www.nvr.navy.mil)

Official inventory of U.S. Naval ships and service craft.

USS Constitution

(www.ussconstitution.navy.mil)

Visit the oldest commissioned ship in the Navy.

Aviation

Naval Air Forces, Pacific

(www.airpac.navy.mil)

Blue Angels

(www.blueangels.navy.mil)

Submarines

100th anniversary of the U.S.

Navy's silent service

(www.chinfo.navy.mil/navpalib/ships/submarines/sub100.html)

As the world celebrates the start of a new century, the U.S. Navy's submarine force is celebrating its 100th anniversary.

Submarine Force, Atlantic

(www.norfolk.navy.mil/sublant/homepage.htm)

Submarine Force, Pacific

(www.csp.navy.mil)

Undersea Warfare Magazine

(www.chinfo.navy.mil/navpalib/cno/n87/usw.html)

Special Warfare

Navy SEALs

(<http://webix.nosc.mil/seals>)

(under construction at press time)

Medical/Dental

BUMED

(<http://navymedicine.med.navy.mil>)

navy.mil)

Where Navy medicine begins.

TRICARE

(www.tricare.osd.mil)

The latest information on the health services program for military personnel and their families.

United Concordia

(www.ucci.com/government/governmentprog.html) Information on the military's dental plan.

Personnel/Pay Issues

BUPERS

(www.bupers.navy.mil)

Advancements, personnel policy, detailers, etc., all in one place.

Defense Finance and Accounting Service

(www.dfas.mil)

The military pay section has the latest pay charts and allowances information.

Training & Education

Naval Education and Training

(www.cnet.navy.mil)

Site of the Navy's training gurus.

The Navy College Program

(<http://www.navycollege.navy.mil>)

Get the scoop on this great new program designed with your future in mind.

Naval Air Training Command

(www.cnet.navy.mil/cnatra/cnatra.htm)

The people, planes and places where aviators are born.

NTC Great Lakes

(www.ntcpao.com/index.html)

Home of the Navy's recruit training facilities.

NROTC

(www.cnet.navy.mil/nrotc/nrotc.htm)

All about the program that turns college students into officers.

NJROTC

(www.cnet.navy.mil/njrotc/njrotc.htm)

A program for high school students seeking the Navy experience.

Miscellaneous Navy Related Sites

"Lifelines" Quality of Life Mall

(www.lifelines4qol.org)

Your one-stop virtual shopping mall for military quality of life issues.

Navy/Marine Corps Relief Society

(www.ncts.navy.mil/homepages/nmcrs)

Helping Sailors, Marines and their families.

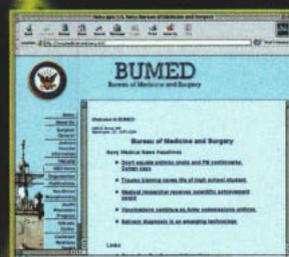
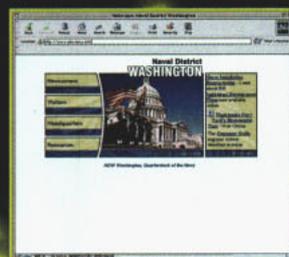
U.S. Naval Institute

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One of the preeminent Navy think tanks and publisher of some good books, too!

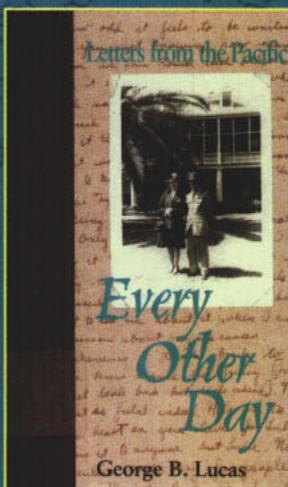
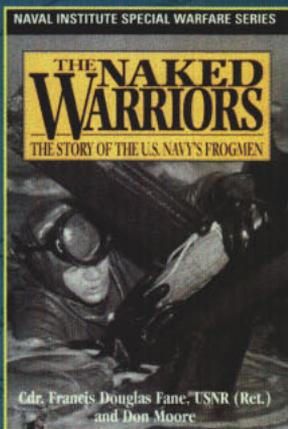
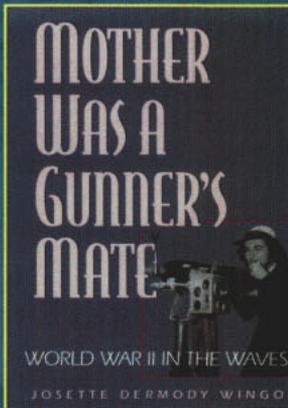
Navy Memorial

(www.lonesailor.org)



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A Sailor's Log: Recollections of Forty Years of Naval Life

by RADM Robert D. Evans with introduction by Benjamin Franklin Cooling

Battleship Sailor

by Theodore C. Mason

Blood on the Sea

by Robert Sinclair Parkin

Bluejacket: An Autobiography

by Fred J. Buenzle with A. Grove Day
Brave Ship, Brave Men by Arnold S. Lott

Bull Halsey: A Biography

by E. B. Potter

Crossing the Line: A Bluejacket's World War II Odyssey

by Alvin Kernan

Descent Into Darkness

by CDR Edward C. Raymer

Devil Boats

by William Breuer

Devotion to Duty – A Biography of Admiral Clifton A. F. Sprague

by John F. Wukovits

Every Other Day: Letters from the Pacific

by George B. Lucas

Fatal Voyage

by Dan Kurzman

Good Night Officially

by William M. McBride

In Love and War: Revised and Updated

by Jim and Sybil Stockdale

Inchon to Wonsan: From the Deck of a Destroyer in the Korean War

by James Edwin Alexander

Iwo

by Richard Wheeler

Man-of-War Life

by Charles Nordhoff

Master of Seapower: A Biography of Fleet Admiral Ernest J. King

by Thomas B. Buell, with introduction by John B. Lundstrom

Mother Was a Gunner's Mate: World War II in the Waves

by Josette Dermody Wingo

My Fifty Years in the Navy

by ADM Charles E. Clark, with introduction by Jack Sweetman

Naked Warriors

by CDR Frances Douglas Fane and Don Moore

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by E. B. Potter

On Watch

by ADM Elmo Zumwalt

Proudly We Served – The Men of USS Mason

by Mary Pat Kelly

Raiders from the Sea

by John Lodwick

Raiders of the Deep

by Lowell Thomas, with introduction by Gary E. Weir

Ship's Doctor

by Captain Terrence Riley

Submarine Diary – The Silent Stalking of Japan

by RADM Corwin Mendenhall

The Atlantic War Remembered – An Oral History Collection

by John T. Mason Jr.

The Battle of Cape Esperance – Encounter at Guadalcanal

by CAPT Charles Cook, USN (Ret.)

The Fighting Liberty Ships – A Memoir

by A.A. Hoehling

The Fleet the Gods Forgot

by W.G. Winslow

The Ghost That Died at Sunda Strait

by W.G. Winslow

The Golden Thirteen – Recollections of the First Black Naval Officers

by Paul Stillwell with Colin L. Powell

The Last Patrol

by Harry Holmes

The Ship That Held the Line

by Lisle A. Rose

Thunder Below

by ADM Eugene B. Fluckey, USN (Ret.)

Tin Can Man

by E. J. Jernigan

Tin Can Sailor – Life Aboard the USS Sterett, '39-'45

by C. Raymond Calhoun

Ultra in the Pacific: How Breaking Japanese Codes and Ciphers Affected Naval Operations Against Japan

by John Winton

"B" List: Reference

Admiral John H. Towers – The Struggle for Naval Air Supremacy

by William F. Trimble

Admiral William Shepherd Benson – The First Chief of Naval Operations

by Mary Klachko and David F. Trask

Against All Odds: The Battles at Sea, 1591-1949

by Alexander McKee

Air Raid: Pearl Harbor! – Recollections of a Day of Infamy

by Paul Stillwell

All at Sea

by Louis R. Harlany

Allied Escort Carriers

by Kenneth Poolman

American Naval History – An Illustrated Chronology of the U.S. Navy and Marine Corps, 1775-Present

by Jack Sweetman

And I was There

by Rear Adm. Edwin T. Layton

Assault on Normandy – First Person

Got some spare time? Take a few minutes and check out the MCPON's Naval Heritage and Core Values Reading Guide. The books are available through the Navy Exchange or the Uniform Center toll-free ordering system. You can view the complete list of books at: www.chinfo.navy.mil/navpalib/mcpon/readguide.html

Accounts from the Sea Services
by Paul Stillwell

At Dawn We Slept
by Gordon W. Prance

Authors at Sea: Modern American Writers Remember Their Naval Service
by Robert Shenk

Battleships in Action, Vols I & II
by H. W. Wilson

Clash of the Titans
by Walter J. Boyne

Crisis in the Pacific
by Gerald Astor

Decision and Dissent with Halsey at Leyte Gulf
by Carl Solberg

E-Boat Alert – Defending the Normandy Invasion Fleet
by James Foster Tent

Feet Wet
by Rear Adm. Paul T. Gilchrist

Fighter Squadron at Guadalcanal
by Max Brand

Fighting Squadron – A Sequel to Dive Bomber
by Robert A. Winston

Gray Steel and Black Oil: Fast Tankers and Replenishment at Sea in the U. S. Navy, 1912-92
by Thomas Wildenberg

Heroes in Dungarees – The Story of the American Merchant Marines in World War II
by John Bunker

History of the U.S. Navy, Vol. One, 1775-1941
by Robert W. Love Jr.

John Paul Jones – America's Sailor by Clara Ann Simmons

Kinkaid of the Seventh Fleet: A Biography of Admiral Thomas C. Kinkaid, USN
by Gerald E. Wheeler

Longitude

by Dava Sobel

Miracle at Midway
by Gordon W. Prance

Nautilus: The Story of Man Under the Sea
by Roy Davies

Normandy
by Vice Adm. William P. Mack

Okinawa – The Last Battle of World War II
by Robert Lackie

Prisoners of the Japanese
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Red Scorpion – The War Patrols of the USS Rasher
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Rocks & Shoals: Naval Discipline in the Age of Fighting Sail
by James E. Valle

Run Silent/Run Deep
by Captain Edward L. Beach

Sea Power: A Naval History
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by Steve and Yogi Kaufman

The Battle of Leyte Gulf
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The Book of Navy Songs
by The Trident Society

The Cruel Sea
by Nicholas Monsarrat with intro by Captain Edward L. Beach

The Fast Carriers – The Forging of an Air Navy
by Clark G. Reynolds

The First Team and the Guadalcanal Campaign: Naval Fighter Combat from August to November 1942
by John B. Lundstrom

The First Team: Pacific Naval Air Combat from Pearl Harbor to Midway
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The Little Giants – U.S. Escort Carriers Against Japan
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The Lost Ships of Guadalcanal
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The Naval Air War, 1939-1945
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War at Sea
by Nathan Miller

War Beneath the Sea
by Peter Sudfield

War in the Boats
by Captain William J. Ruhe

We Pulled Together and Won! Personal Memories of the World War II Era
by Reminisce Books

We Will Stand By You – Serving in the Pawnee, 1942-1945
by Theodore C. Mason

What a Way to Spend a War: Navy Nurse POWs in the Philippines
by Dorothy Still Danner

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History of U. S. Naval Operations in World War II

by Samuel Eliot Morrison:

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Vol. II: Operations in North African Waters

Vol. III: The Rising Sun in the Pacific

Vol. IV: Coral Sea, Midway and Submarine Actions

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Elkhorn

Public Access TV
Ch. 11 — Eau Claire

Marcus Cable
Ch. 8 — Fond Du Lac

Viacom Cablevision
Greenfield

Hudson Community
Access TV
Hudson

City Of Lake Mills Cable
TV
Lake Mills

City Channel 26
Milwaukee

Oshkosh Community
Access TV
Ch. 10 — Oshkosh

WOW Cable 12
Oregon

River Falls Public Access
TV
River Falls

TV 8 WSCS
Sheboygan

Access TV
Ch. 21 — Watertown

Wausau Public Access
Ch. 29 — Wausau

City Of Whitewater
Ch. 5 — Whitewater

Public Access
Ch. 4 — Wisconsin Rapids

West Bend Community
Cable
West Bend

For more information on receiving NMCN
on your local cable station, contact John
Morrisey at 202-433-5844.

Ranks

Commissioned Officers

	HAT/SHOULDER/COLLAR	SHOULDER BOARDS	SLEEVE
01 Ensign			
02 Lieutenant Junior Grade			
03 Lieutenant			
04 Lieutenant Commander			
05 Commander			
06 Captain			
07 Rear Admiral (Lower Half)			
08 Rear Admiral (Upper Half)			
09 Vice Admiral			
10 Admiral			

Warrant Officers

	HAT/SHOULDER/COLLAR	SHOULDER BOARDS	SLEEVE
W1 Chief Warrant Officer			
W2 Chief Warrant Officer			
W3 Chief Warrant Officer			
W4 Chief Warrant Officer			

Enlisted Members

Line/Staff/Warrant Officer Sleeve Devices

HAT/COLLAR

SLEEVE

E-1	Seaman Recruit		
E-2	Seaman Apprentice		
E-3	Seaman		
E-4	Petty Officer Third Class		
E-5	Petty Officer Second Class		
E-6	Petty Officer First Class		
E-7	Chief Petty Officer		
E-8	Senior Chief Petty Officer		
E-9	Master Chief Petty Officer		
E-9	Master Chief Petty Officer of the Navy		

Line		Cryptologic Technician	
Supply Corps		Repair Technician	
Medical Corps		Intelligence Technician	
Nurse Corps		Boatswain	
Medical Service Corps		Data Processing Technician	
Dental Corps		Engineering/Nuclear Power Technician	
Physician's Assistant		Aerographer	
Judge Advocate General Corps		Air Traffic Controller	
Law Community		Aviation Boatswain	
Christian Chaplain		Explosive Ordnance Disposal	
Jewish Chaplain		Aviation Electronics Technician	
Muslim Chaplain		Aviation Ordnance Technician	
Civil Engineer Corps		Band Master	
Ship's Clerk		Ordnance Technician	

*Devices for Diving Officer and Security Technician not pictured

Enlisted Ratings



AB

Aviation Boatswain's Mate

ABE (Launching and Recovery Equipment)
ABF (Fuels)
ABH (Aircraft Handling)



AC

Air Traffic Controller



AD

Aviation Machinist's Mate



AE

Aviation Electrician's Mate



AG

Aerographer's Mate



AK

Aviation Storekeeper



AM

Aviation Structural Mechanic

AME (Safety Equipment)
AMH (Hydraulic)
AMS (Structural)



AO

Aviation Ordnanceman



AS

Aviation Support Equipment Technician



AT

Aviation Electronics Technician



AW

Aviation Antisubmarine Warfare Operator



AZ

Aviation Maintenance Administrationman



BM

Boatswain's Mate



BU

Builder



CE

Construction Electrician



CM

Construction Mechanic



CT

Cryptologic Technician

CTA (Administrative)
CTI (Interpretive)
CTM (Maintenance)
CTO (Communication)
CTR (Collection)
CTT (Technical)



DC

Damage Controlman



DK

Disbursing Clerk



DM

Illustrator/Draftsman



DT

Dental Technician



EA

Engineering Aide



EM

Electrician's Mate



EN

Engineman



EO

Equipment Operator



ET

Electronics Technician



EW

Electronics Warfare Technician



FC

Fire Controlman



FT

Fire Control Technician



GM

Gunner's Mate

GMG (Guns)
GMM (Missiles)



GS

Gas Turbine System Technician

GSE (Electrical)
GSM (Mechanical)



HM

Hospital Corpsman



HT

Hull Maintenance Technician



IC

Interior Communications Electrician



IS

Intelligence Specialist



IT
Information Systems
Technician



JO
Journalist



LI
Lithographer



LN
Legalman



MA
Master-at-Arms



MM
Machinist's Mate



MN
Mineman



MS
Mess Management
Specialist



MT
Missile Technician



MU
Musician



NC
Navy Counselor



OS
Operations Specialist



OT
Ocean Systems Technician
OTA (Analyst)
OTM (Maintainer)



PC
Postal Clerk



PH
Photographer's Mate



PN
Personnelman



PR
Aircrew Survival
Equipmentman



QM
Quartermaster



RP
Religious Program
Specialist



SH
Ship's Serviceman



SK
Storekeeper



SM
Signalman



ST
Sonar Technician
STG (Surface)
STS (Submarine)



SW
Steelworker



TM
Torpedoman's Mate



UT
Utilitiesman



YN
Yeoman



Apprentice Training
Graduate
(Seaman)



Apprentice Training
Graduate
(Fireman)



Apprentice Training
Graduate
(Airman)

RE-UP

To stay or not to stay? That is the question. And the answer can be difficult to come by, especially among first- and second-term Sailors. The oath of reenlistment carries with it a commitment – a commitment to serve. And while that service has its rewards, it also has its hardships.

The Navy is committed to keeping the best Sailors “on board.” The following incentive programs (which are detailed in Chapter 8 of the Enlisted Transfer Manual) are designed to do just that. For complete descriptions and provisions of these programs, Sailors should contact their Command Career Counselors.

Seaman to Admiral Program

The Seaman-to-Admiral Program (STA) provides outstanding enlisted personnel in the Navy, Naval Reserve (TAR) and USNR-R with an exceptional education and commissioning opportunity. Selectees will be ordered to one of seven Naval Reserve Officers Training Corps (NROTC)-affiliated universities on permanent change of station orders. After earning a baccalaureate degree and on successful completion of Officer Candidate School (OCS) in Pensacola, Fla., they will be appointed as a permanent ensign, USNR.

Interested Sailors must submit their applications to Commander, Navy Personnel Command (NPC 811), Naval Support Activity Memphis, 5720 Integrity Drive, Millington, Tenn. 38055-8110, via their commanding officer before July 1 of each year. The Seaman-to-Admiral Selection Board will convene at Navy Personnel Command each September to consider applicants who meet eligibility requirements published by NAVADMIN. Applicants are required to complete the Scholastic Aptitude Test (SAT) or American College Test (ACT). For details on the SAT or ACT, contact your local Navy Campus Office.

When preparing to submit their application package, interested Sailors are strongly encouraged to assemble the following documents: college transcript(s) from each college attended; high school transcript(s) from each high school attended (if you have a GED Certificate and some high school, you will need to submit both the certificate and the partial high school transcript); SAT or ACT scores (must not be older than two years as of July 1 of the year applying); certified copies of evaluations; certified copies of PRT

results; certified copies of special qualifications documents; and a statement of desire for a commission.

For additional information call DSN 922-4941 ext. 306 or Commercial (850) 452-4941 ext. 306, or send e-mail to cnet.sta@smtp.cnet.navy.mil.

School Assignment as a Reenlistment Incentive

Some Sailors place specific training desires above ultimate duty stations. For them, a set of orders with a school en route is the greater good.

The program requirements include:

- Must be willing to incur additional obligated service in exchange for training.
- Must maintain minimum performance standards.
- Must provide some assurance that the training received will be effectively used. For instance, a skill gained through training which can only be used at sea will not be provided for someone heading to shore duty. Likewise, a chief petty officer won't be assigned to a school whose training is intended for use by junior petty officers.

Reference: Article 8.03, Enlisted Transfer Manual

SCORE (Selective Conversion and Reenlistment) Program

SCORE offers incentives to Sailors who wish to convert to undermanned (CREO 1) ratings.

SCORE incentives include: assignment to Class “A” and, if available, Class “C” schools; possible advancement to third or second class petty officer; and, if eligible, Selective Reenlistment Bonus (SRB).

The program requirements include:

- Must be presently assigned in a rating listed as Category 2 or 3 in the most current CREO listing.

- Must be in pay grades E-3 through E-6.
- Must meet requirements for entrance to appropriate schools.
- Must have maintained sustained superior performance in their present rating.
- Can not have received previous benefits from the STAR, SCORE or RESCORE programs.

Reference: Article 1060010, Military Personnel Manual

RESCORE (Recruiting Selective Conversion and Reenlistment) Program

The RESCORE Program offers similar incentives as SCORE for Navy Veterans (NAVETS) who reenlist after a 24-hour break in service.

Reference: Article 1060011, Military Personnel Manual (MILPERSMAN)

STAR (Selective Training and Reenlistment) Program

Under the STAR Program, Sailors can receive a career designation and become eligible for the following incentives:

- Guaranteed assignment to Class “A” or “C” school.
- Guaranteed advancement to third or second class petty officer upon completion of required schools or training packages.
- Selective Reenlistment Bonus (SRB), if eligible.

The program requirements include:

- Must be a designated striker (E-3) or second or third class petty officer.
- Must have at least 21 months and not more than six years of continuous naval service. Veterans of other services cannot have more than eight years of total military service.
- Must meet minimum performance requirements and have a clear military record.

Reference: Article 1060020, Military Personnel Manual

Order of Precedence — U.S. Navy



Medal Of Honor



Navy Cross



Defense Distinguished Service Medal



Distinguished Service Medal



Silver Star



Defense Superior Service Medal



Legion of Merit



Distinguished Flying Cross



Navy/Marine Corps Medal



Bronze Star



Purple Heart



Defense Meritorious Service Medal



Meritorious Service Medal



Air Medal



Joint Service Commendation Medal



Navy/Marine Corps Commendation Medal



Joint Service Achievement Medal



Navy/Marine Corps Achievement Medal



Combat Action Ribbon



Presidential Unit Citation



Joint Meritorious Unit Award



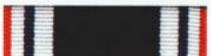
Navy Unit Commendation



Meritorious Unit Commendation



Battle "E" Ribbon



POW Medal



Good Conduct Medal



Naval Reserve Meritorious Service Medal



Fleet Marine Force Ribbon



Navy Expeditionary Medal



China Service Medal



Navy Occupation Service Medal



National Defense Service Medal



Korean Service Medal



Antarctica Service Medal



Armed Forces Expeditionary Medal



Vietnam Service Medal



Southwest Asia Service Medal



Armed Forces Service Medal



Humanitarian Service Medal



Military Outstanding Volunteer Service Medal



Sea Service Deployment Ribbon



Navy Arctic Service Ribbon



Naval Reserve Sea Service Ribbon



Navy/Marine Corps Overseas Service Ribbon



Navy Recruiting Service Ribbon



Armed Forces Reserve Medal



Naval Reserve Medal



Philippine Presidential Unit Citation



Republic of Korea Presidential Unit Citation



Republic of Vietnam Presidential Unit Citation



Republic of Vietnam Gallantry Cross Unit Citation



Republic of Vietnam Civil Actions Unit Citation



United Nations Service Medal



United Nations Medal



NATO Medal



Multinational Force and Observers Medal



**Inter American
Defense Board Medal**



**Republic of Vietnam
Campaign Medal**



**Kuwait Liberation
Medal
(Kingdom of Saudi
Arabia)**



**Kuwait Liberation
Medal
(Kuwait)**



**Rifle Marksmanship
Medal**



**Pistol Marksmanship
Medal**

Devices



Gold Star

Denotes each subsequent award of the same Navy decoration.



Silver Star

Worn in the same manner as the gold star, in lieu of five gold stars.



Bronze Service Star

Represents participation in campaigns or operations, multiple qualification or an additional award to any of the various ribbons on which it is authorized. Also worn to denote first award of the single-mission Air Medal after Nov. 22, 1989.



Silver Service Star

Worn in the same manner as the bronze service star, in lieu of five bronze service stars.



Bronze Oak Leaf Cluster

Represents second and subsequent entitlements of awards.



Silver Oak Leaf Cluster

Worn for the 6th, 11th or in lieu of five bronze oak leaf clusters.



WINTERED OVER

Wintered Over

For wintering over on the Antarctic continent - a clasp for Antarctic Service Medal; a suspension ribbon and a disc for the service ribbon of bronze for first winter; gold for the second winter; and silver for the third winter.



"V" Device

Authorized for acts or service involving direct participation in combat operations.



Hourglass

Issued for each succeeding award of the Armed Forces Reserve Medal.



Europe and Asia Clasps

Worn on the suspension ribbon of the Navy Occupation Service Medal.



**Fleet Marine Force
Combat Operations
Insignia**

For Navy personnel attached to Fleet Marine Force units participating in combat operations.



Silver "E"

Denotes Expert Marksman qualification.



Bronze "S"

Denotes Sharpshooter Marksman qualification.



"M" Device

Denotes Naval Reserve mobilization in support of certain operations.



Strike/Flight Device

Bronze Arabic numeral denotes the total number of strike/flight awards of the Air Medal earned subsequent to April 9, 1962.



"3/16" Palm

Worn on the Republic of Vietnam Gallantry Cross Unit Citation and Republic of Vietnam Civil Actions Unit Citation ribbons.



"E" Wreath

Denotes four or more Battle "E" Awards.

Warfare Pins & Badges



Naval Astronaut



Naval Astronaut (NFO)



Naval Aviator



Dirigible Pilot



**Naval Aviation Observer
and Flight Meteorologist**



Naval Flight Surgeon



Naval Flight Nurse



Naval Flight Officer



**Aviation Experimental
Psychologist and Aviation
Psychologist**



**Enlisted Aviation Warfare
Specialist**



**Naval Aviation Supply
Corps**



Aircrew



Marine Combat Aircrew



Special Warfare



Special Operations



Surface Warfare (officer)



Surface Warfare (enlisted)



**Surface Warfare
(nurse)**



**Surface Warfare
(medical)**



**Surface Warfare
(dental)**



**Surface Warfare
(medical service)**



**Surface Warfare
(supply)**



Submarine (officer)



Submarine (enlisted)



Submarine (medical)



**Submarine
(engineering duty)**



Submarine (supply)



**Submarine
Combat Patrol**



**SSBN Deterrent Patrol
(20 patrols)**



**SSBN Deterrent Patrol
(12 patrols)**



**Seabee Combat Warfare
Specialist (officer)**



**Seabee Combat Warfare
Specialist (enlisted)**



Naval Parachutist



Basic Parachutist



**Naval Reserve
Merchant Marine**



Integrated Undersea Surveillance System (officer)



Integrated Undersea Surveillance System (enlisted)



Master Explosive Ordnance Disposal



Senior Explosive Ordnance Disposal



Explosive Ordnance Disposal



Diving (officer)



Diving (medical)



Master Diver



Diver (medical technician)



First Class Diver



Second Class Diver



Scuba Diver



Deep Submergence (officer)



Deep Submergence (enlisted)



Presidential Service Badge



Vice Presidential Service Badge



Office of the Secretary of Defense



Joint Chiefs of Staff



Recruiting Command



Recruiting Command for Excellence



Recruiter



Career Counselor



Recruit Company Commander



Command-at-Sea



Command Ashore



Officer in Charge (small craft)



Petty Officer in Charge (small craft)



Craftmaster



Master Chief Petty Officer of the Navy



Force Master Chief Petty Officer



Fleet Master Chief Petty Officer



Master Chief Petty Officer of the Command



Senior Chief Petty Officer of the Command



Chief Petty Officer of the Command



U.S. Navy Police (officer)



U.S. Navy Police (enlisted)



U.S. Navy Security



U.S. Navy Corrections

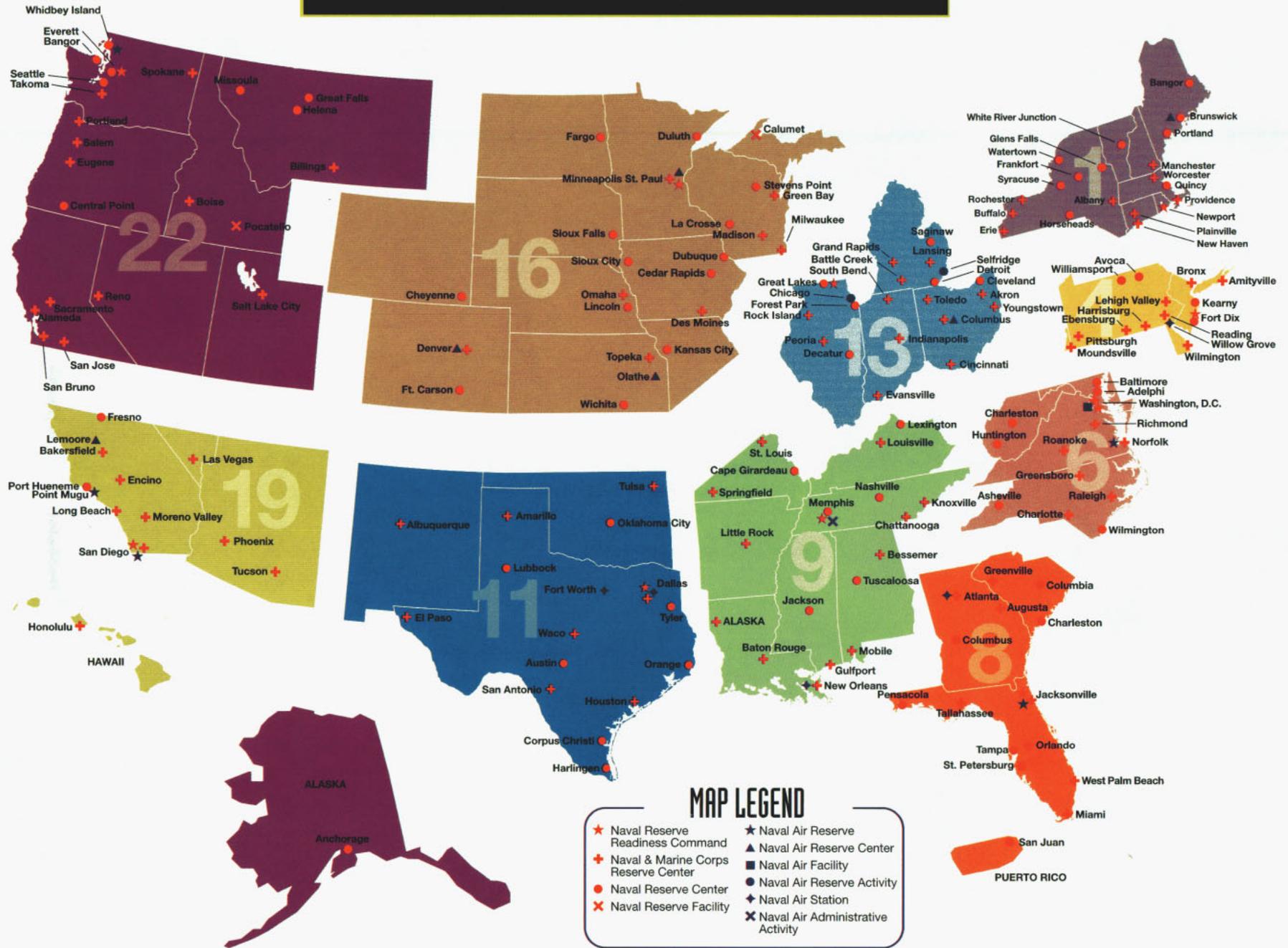


U.S. Navy Guard



U.S. Navy Master-at-Arms

Naval Reserve Activities



CRUISERS

Ticonderoga-class

- USS *Ticonderoga* (CG 47)
- USS *Yorktown* (CG 48)
- USS *Vincennes* (CG 49)
- USS *Valley Forge* (CG 50)
- USS *Thomas S. Gates* (CG 51)
- USS *Bunker Hill* (CG 52)
- USS *Mobile Bay* (CG 53)
- USS *Antietam* (CG 54)
- USS *Leyte Gulf* (CG 55)
- USS *San Jacinto* (CG 56)
- USS *Lake Champlain* (CG 57)
- USS *Philippine Sea* (CG 58)
- USS *Princeton* (CG 59)
- USS *Normandy* (CG 60)
- USS *Monterey* (CG 61)
- USS *Chancellorsville* (CG 62)
- USS *Cowpens* (CG 63)
- USS *Gettysburg* (CG 64)
- USS *Chosin* (CG 65)
- USS *Hue City* (CG 66)
- USS *Shiloh* (CG 67)
- USS *Anzio* (CG 68)
- USS *Vicksburg* (CG 69)
- USS *Lake Erie* (CG 70)
- USS *Cape St. George* (CG 71)
- USS *Vella Gulf* (CG 72)
- USS *Port Royal* (CG 73)



USS *Thach* (FFG 43)



Photo by PH2 Jim Vidrine

USS *Shiloh* (CG 67)

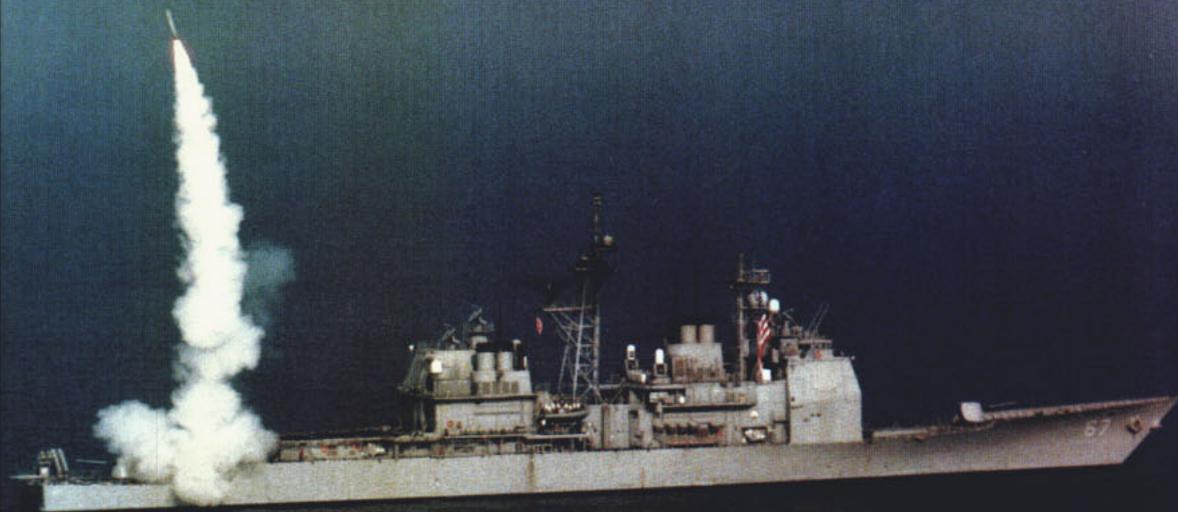


Photo by PH1 Wayne Edwards

AMPHIBIOUS ASSAULT

Tarawa-class

USS *Tarawa* (LHA 1)
 USS *Saipan* (LHA 2)
 USS *Belleau Wood* (LHA 3)
 USS *Nassau* (LHA 4)
 USS *Peleliu* (LHA 5)

Wasp-class

USS *Wasp* (LHD 1)
 USS *Essex* (LHD 2)
 USS *Kearsarge* (LHD 3)
 USS *Boxer* (LHD 4)
 USS *Bataan* (LHD 5)
 USS *Bonhomme Richard* (LHD 6)
 USS *Iwo Jima* (LHD 7)*



Photo by PH2 Arlo Abramson



USS *O'Kane* (DDG 77)

DESTROYERS

Spruance-class

USS *Spruance* (DD 963)
 USS *Paul F. Foster* (DD 964)
 USS *Kinkaid* (DD 965)
 USS *Hewitt* (DD 966)
 USS *Elliot* (DD 967)
 USS *Arthur W. Radford* (DD 968)
 USS *Peterson* (DD 969)
 USS *Caron* (DD 970)
 USS *David R. Ray* (DD 971)
 USS *Oldendorf* (DD 972)
 USS *John Young* (DD 973)
 USS *O'Brien* (DD 975)
 USS *Briscoe* (DD 977)
 USS *Stump* (DD 978)
 USS *Moosbrugger* (DD 980)
 USS *John Hancock* (DD 981)
 USS *Nicholson* (DD 982)
 USS *Cushing* (DD 985)
 USS *O'Bannon* (DD 987)
 USS *Thorn* (DD 988)
 USS *Deyo* (DD 989)
 USS *Fife* (DD 991)
 USS *Fletcher* (DD 992)
 USS *Hayler* (DD 997)

Arleigh Burke-class

USS *Arleigh Burke* (DDG 51)
 USS *Barry* (DDG 52)
 USS *John Paul Jones* (DDG 53)
 USS *Curtis Wilbur* (DDG 54)
 USS *Stout* (DDG 55)
 USS *John S. McCain* (DDG 56)
 USS *Mitscher* (DDG 57)
 USS *Laboon* (DDG 58)
 USS *Russell* (DDG 59)
 USS *Paul Hamilton* (DDG 60)
 USS *Ramage* (DDG 61)
 USS *Fitzgerald* (DDG 62)
 USS *Stethem* (DDG 63)
 USS *Carney* (DDG 64)
 USS *Benfold* (DDG 65)
 USS *Gonzalez* (DDG 66)
 USS *Cole* (DDG 67)
 USS *The Sullivans* (DDG 68)
 USS *Milius* (DDG 69)
 USS *Hopper* (DDG 70)
 USS *Ross* (DDG 71)
 USS *Mahan* (DDG 72)
 USS *Decatur* (DDG 73)
 USS *McFaul* (DDG 74)
 USS *Donald Cook* (DDG 75)
 USS *Higgins* (DDG 76)
 USS *O'Kane* (DDG 77)
 USS *Porter* (DDG 78)
 USS *Oscar Austin* (DDG 79)*
 USS *Roosevelt* (DDG 80)*
 USS *Winston S. Churchill* (DDG 81)*
 USS *Lassen* (DDG 82)*
 USS *Howard* (DDG 83)*
 USS *Bulkeley* (DDG 84)*
 USS *McCampbell* (DDG 85)*

FRIGATES

Oliver Hazard Perry-class

USS *McInerney* (FFG 8)
 USS *Wadsworth* (FFG 9)**
 USS *Clark* (FFG 11)*
 USS *George Phillip* (FFG 12)*
 USS *Samuel Eliot Morison* (FFG 13)*
 USS *Sides* (FFG 14)*
 USS *Estocin* (FFG 15)*
 USS *John A. Moore* (FFG 19)**
 USS *Boone* (FFG 28)
 USS *Stephen W. Groves* (FFG 29)**
 USS *Stark* (FFG 31)
 USS *John L. Hall* (FFG 32)
 USS *Jarrett* (FFG 33)
 USS *Underwood* (FFG 36)
 USS *Crommelin* (FFG 37)
 USS *Curtis* (FFG 38)*
 USS *Doyle* (FFG 39)
 USS *Halyburton* (FFG 40)
 USS *McClusky* (FFG 41)
 USS *Klaking* (FFG 42)
 USS *Thach* (FFG 43)
 USS *DeWert* (FFG 45)
 USS *Rentz* (FFG 46)
 USS *Nicholas* (FFG 47)
 USS *Vandergrift* (FFG 48)
 USS *Robert G. Bradley* (FFG 49)
 USS *Taylor* (FFG 50)
 USS *Gary* (FFG 51)
 USS *Carr* (FFG 52)
 USS *Hawes* (FFG 53)
 USS *Ford* (FFG 54)
 USS *Elrod* (FFG 55)
 USS *Simpson* (FFG 56)
 USS *Reuben James* (FFG 57)
 USS *Samuel B. Roberts* (FFG 58)
 USS *Kauffman* (FFG 59)
 USS *Rodney M. Davis* (FFG 60)
 USS *Ingraham* (FFG 61)



*Under Construction
 **Naval Reserve Force, Active



USS Mount Whitney (LCC 20)

U.S. Navy Photo

AMPHIBIOUS TRANSPORT DOCK

Austin-class

- USS Austin (LPD 4)
- USS Ogden (LPD 5)
- USS Duluth (LPD 6)
- USS Cleveland (LPD 7)
- USS Dubuque (LPD 8)
- USS Denver (LPD 9)
- USS Juneau (LPD 10)
- USS Shreveport (LPD 12)
- USS Nashville (LPD 13)
- USS Trenton (LPD 14)
- USS Ponce (LPD 15)

San Antonio-class

- San Antonio (LPD 17)*



AMPHIBIOUS DOCK LANDING

Anchorage-class

- USS Anchorage (LSD 36)
- USS Portland (LSD 37)
- USS Pensacola (LSD 38)
- USS Mount Vernon (LSD 39)

Whidbey Island-class/ Harpers Ferry-class

- USS Whidbey Island (LSD 41)
- USS Germantown (LSD 42)
- USS Fort McHenry (LSD 43)
- USS Gunston Hall (LSD 44)
- USS Comstock (LSD 45)
- USS Tortuga (LSD 46)
- USS Rushmore (LSD 47)
- USS Ashland (LSD 48)
- USS Harpers Ferry (LSD 49)
- USS Carter Hall (LSD 50)
- USS Oak Hill (LSD 51)
- USS Pearl Harbor (LSD 52)

USS Boxer (LHD 4)



Photo by PHAN Richard W. Williams



USS Coronado (AGF 11)

AMPHIBIOUS COMMAND

Blue Ridge-class

- USS Blue Ridge (LCC 19)
- USS Mount Whitney (LCC 20)

LaSalle & Coronado-class

- USS LaSalle (AGF 3)
- USS Coronado (AGF 11)



USS Denver (LPD 9)

USS Gunston Hall (LSD 44)



Photo by PH2 Keith W. Delaney

MINE WARFARE

Avenger-class

- USS Avenger (MCM 1)**
- USS Defender (MCM 2)**
- USS Sentry (MCM 3)**
- USS Champion (MCM 4)**
- USS Guardian (MCM 5)
- USS Devastator (MCM 6)
- USS Patriot (MCM 7)
- USS Scout (MCM 8)
- USS Pioneer (MCM 9)
- USS Warrior (MCM 10)
- USS Gladiator (MCM 11)
- USS Ardent (MCM 12)
- USS Dextrous (MCM 13)
- USS Chief (MCM 14)

Iwo Jima-class

- USS Inchon (MCS 12)**

Osprey-class

- USS Osprey (MHC 51)
- USS Heron (MHC 52)**
- USS Pelican (MHC 53)**
- USS Robin (MHC 54)**
- USS Oriole (MHC 55)**
- USS Kingfisher (MHC 56)**
- USS Cormorant (MHC 57)**
- USS Black Hawk (MHC 58)**
- USS Falcon (MHC 59)**
- USS Cardinal (MHC 60)**
- USS Raven (MHC 61)**
- USS Shrike (MHC 62)

PATROL BOATS

Cyclone-class

- USS Cyclone (PC 1)
- USS Tempest (PC 2)
- USS Hurricane (PC 3)
- USS Monsoon (PC 4)
- USS Typhoon (PC 5)
- USS Sirocco (PC 6)
- USS Squall (PC 7)
- USS Zephyr (PC 8)
- USS Chinook (PC 9)
- USS Firebolt (PC 10)
- USS Whirlwind (PC 11)
- USS Thunderbolt (PC 12)
- USS Shamal (PC 13)
- Tornado (PC 14)*



AUXILIARY SHIPS

Sacramento-class/ Supply-class (Fast Combat Support Ships)

- USS Sacramento (AOE 1)
- USS Camden (AOE 2)
- USS Seattle (AOE 3)
- USS Detroit (AOE 4)
- USS Supply (AOE 6)
- USS Rainier (AOE 7)
- USS Arctic (AOE 8)
- USS Bridge (AOE 10)

Safeguard-class (Salvage Ships)

- USS Safeguard (ARS 50)
- USS Grasp (ARS 51)
- USS Salvor (ARS 52)
- USS Grapple (ARS 53)

Emory S. Land-class (Submarine Tenders)

- USS Emory S. Land (AS 39)
- USS Frank Cable (AS 40)

AMPHIBIOUS TANK LANDING

Newport-class

- USS Frederick (LST 1184)**
- USS LaMoure County (LST 1194)**

*Under Construction
**Naval Reserve Force, Active

<p>USNS SHIPS</p> <p>T-ACS (Crane Ships)</p> <p>USNS <i>Keystone State</i> (T-ACS 1) USNS <i>Gem State</i> (T-ACS 2) USNS <i>Grand Canyon State</i> (T-ACS 3) USNS <i>Gopher State</i> (T-ACS 4) USNS <i>Flickertail State</i> (T-ACS 5) USNS <i>Cornhusker State</i> (T-ACS 6) USNS <i>Diamond State</i> (T-ACS 7) USNS <i>Equality State</i> (T-ACS 8) USNS <i>Green Mountain State</i> (T-ACS 9) USNS <i>Beaver State</i> (T-ACS 10)</p> <p>T-AE (Ammunition Ships)</p> <p>USNS <i>Kilauea</i> (T-AE 26) USNS <i>Butte</i> (T-AE 27) USNS <i>Santa Barbara</i> (T-AE 28) USNS <i>Flint</i> (T-AE 32) USNS <i>Shasta</i> (T-AE 33) USNS <i>Mount Baker</i> (T-AE 34) USNS <i>Kiska</i> (T-AE 35)</p> <p>T-AFS (Combat Stores Ships)</p> <p>USNS <i>Niagara Falls</i> (T-AFS 3) USNS <i>Concord</i> (T-AFS 5) USNS <i>San Jose</i> (T-AFS 7) USNS <i>Sirius</i> (T-AFS 8) USNS <i>Spica</i> (T-AFS 9) USNS <i>Saturn</i> (T-AFS 10)</p> <p>T-AG (Missile Range Instrumentation Ship)</p> <p>USNS <i>Hayes</i> (T-AG 195)</p> <p>T-AGM (Special Mission Ship)</p> <p>USNS <i>Observation Island</i> (T-AGM 23)</p> <p>T-AGS (Special Mission Ship)</p> <p>USNS <i>Waters</i> (T-AGS 45)</p> <p>T-AGOS (Ocean Surveillance Ships)</p> <p>USNS <i>Stalwart</i> (T-AGOS 1) USNS <i>Vindicator</i> (T-AGOS 3) USNS <i>Persistent</i> (T-AGOS 6) USNS <i>Indomitable</i> (T-AGOS 7) USNS <i>Prevail</i> (T-AGOS 8) USNS <i>Assertive</i> (T-AGOS 9) USNS <i>Bold</i> (T-AGOS 12) USNS <i>Capable</i> (T-AGOS 16)</p>	<p>USNS <i>Victorious</i> (T-AGOS 19) USNS <i>Able</i> (T-AGOS 20) USNS <i>Effective</i> (T-AGOS 21) USNS <i>Loyal</i> (T-AGOS 22) USNS <i>Impeccable</i> (T-AGOS 23)</p> <p>T-AGS (Oceanographic Survey Ships)</p> <p>USNS <i>Kane</i> (T-AGS 27) USNS <i>John McDonnell</i> (T-AGS 51) USNS <i>Littlehales</i> (T-AGS 52) USNS <i>Pathfinder</i> (T-AGS 60) USNS <i>Sumner</i> (T-AGS 61) USNS <i>Bowditch</i> (T-AGS 62) USNS <i>Henson</i> (T-AGS 63) USNS <i>Bruce Heezen</i> (T-AGS 64)</p> <p>T-AH (Hospital Ships)</p> <p>USNS <i>Mercy</i> (T-AH 19) USNS <i>Comfort</i> (T-AH 20)</p> <p>T-AK (Flo/Flo Ships)</p> <p>USNS <i>American Cormorant</i> (T-AK 2062) USNS <i>Strong Virginian</i> (T-AK 9205)</p> <p>T-AK (Lighter Aboard Ships)</p> <p>USNS <i>Jeb Stuart</i> (T-AK 924) USNS <i>Green Valley</i> (T-AK 2049) USNS <i>Green Harbour</i> (T-AK 2064) USNS <i>Cape Fear</i> (T-AK 5061) USNS <i>Cape Flattery</i> (T-AK 5070) USNS <i>Cape Florida</i> (T-AK 5071) USNS <i>Cape Farewell</i> (T-AK 5073)</p> <p>T-AK (Maritime Pre-positioning Ships)</p> <p>USNS <i>CPL Louis J. Hauge Jr.</i> (T-AK 3000) USNS <i>PFC William B. Baugh</i> (T-AK 3001) USNS <i>PFC James Anderson Jr.</i> (T-AK 3002) USNS <i>1ST LT Alex Bonneyman</i> (T-AK 3003) USNS <i>PVT Franklin J. Phillips</i> (T-AK 3004) USNS <i>SGT Matej Kocak</i> (T-AK 3005) USNS <i>PFC Eugene A. Obregon</i> (T-AK 3006) USNS <i>MAJ Stephen W. Pless</i> (T-AK 3007) USNS <i>2ND LT John P. Bobo</i> (T-AK 3008) USNS <i>PFC Dewayne T. Williams</i> (T-AK 3009)</p>	<p>USNS <i>1ST LT Baldomero Lopez</i> (T-AK 3010) USNS <i>1ST LT Jack Lummus</i> (T-AK 3011) USNS <i>SGT William R. Button</i> (T-AK 3012) USNS <i>1ST LT Harry L. Martin</i> (T-AK 3015) USNS <i>Lance CPL Roy M. Wheat</i> (T-AK 3016)</p> <p>T-AK (Container Ships)</p> <p>USNS <i>Captain Steven L. Bennett</i> (T-AK 4296) USNS <i>LTC Calvin P. Titus</i> (T-AK 5089) USNS <i>SP5 Eric G. Gibson</i> (T-AK 5091)</p> <p>T-AK (Freighters)</p> <p>USNS <i>Green Wave</i> (T-AK 2050) USNS <i>Green Ridge</i> (T-AK 9655) USNS <i>Buffalo Soldier</i> (T-AK 9881)</p> <p>T-AK (Combination Ship)</p> <p>USNS <i>Maersk Constellation</i> (T-AK 9656)</p> <p>T-AKR (Fast Sealift Ships)</p> <p>USNS <i>Algo</i> (T-AKR 287) USNS <i>Bellatrix</i> (T-AKR 288) USNS <i>Denebola</i> (T-AKR 289) USNS <i>Pollux</i> (T-AKR 290) USNS <i>Altair</i> (T-AKR 291) USNS <i>Regulus</i> (T-AKR 292) USNS <i>Capella</i> (T-AKR 293) USNS <i>Antares</i> (T-AKR 294)</p> <p>T-AKR 295 (LMSRs)</p> <p>USNS <i>Shughart</i> (T-AKR 295) USNS <i>Gordon</i> (T-AKR 296) USNS <i>Yano</i> (T-AKR 297) USNS <i>Gilliland</i> (T-AKR 298) USNS <i>Soderman</i> (T-AKR 299) USNS <i>Bob Hope</i> (T-AKR 300) USNS <i>Fisher</i> (T-AKR 301) USNS <i>Seay</i> (T-AKR 302) USNS <i>Mendonca</i> (T-AKR 303) USNS <i>Tilliaau</i> (T-AKR 304) USNS <i>Brittin</i> (T-AKR 305) USNS <i>Watson</i> (T-AKR 310) USNS <i>Sisler</i> (T-AKR 311) USNS <i>Dahl</i> (T-AKR 312) USNS <i>Red Cloud</i> (T-AKR 313) USNS <i>Charlton</i> (T-AKR 314) USNS <i>Watkins</i> (T-AKR 315) USNS <i>Pomeroy</i> (T-AKR 316)</p>
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USS Monongahela (AO 178)



Photo by PH3 Jason D. Malcom



Photo by PH3 James F. Slaughterhaupt

USNS Comfort (T-AH 20), USNS Laramie (AO 203)

<p>T-AO (Oilers)</p> <p>USNS Kanawha (T-AO 96) USNS John Lenthall (T-AO 189) USNS Walter S. Diehl (T-AO 193) USNS John Ericsson (T-AO 194) USNS Leroy Grumman (T-AO 195) USNS Pecos (T-AO 197) USNS Big Horn (T-AO 198) USNS Tippecanoe (T-AO 199) USNS Guadalupe (T-AO 200) USNS Patuxent (T-AO 201) USNS Yukon (T-AO 202) USNS Laramie (T-AO 203) USNS Rappahannock (T-AO 204)</p>	<p>T-AP (Troop Ships)</p> <p>USNS Empire State (T-AP 1001)</p> <p>T-ARC (Cable Repair Ship)</p> <p>USNS Zeus (T-ARC 7)</p> <p>T-ATF (Fleet Ocean Tugs)</p>	<p>USNS Cape Knox (T-AKR 5082) USNS Cape Kennedy (T-AKR 5083) USNS Cape Vincent (T-AKR 9666) USNS Cape Rise (T-AKR 9678) USNS Cape Ray (T-AKR 9679) USNS Cape Victory (T-AKR 9701) USNS Cape Trinity (T-AKR 9711) USNS Cape Race (T-AKR 9960) USNS Cape Washington (T-AKR 9961) USNS Cape Wrath (T-AKR 9962)</p>
<p>T-AOT (Common User Tankers)</p> <p>USNS Nodaway (T-AOT 78) USNS Alatna (T-AOT 81) USNS Chattahoochee (T-AOT 82) USNS Valiant (T-AOT 94A) USNS Mission Buenaventura (T-AOT 1012) USNS Gus W. Darnell (T-AOT 1121) USNS Paul Buck (T-AOT 1122) USNS Samuel L. Cobb (T-AOT 1123) USNS Richard G. Matthiesen (T-AOT 1124) USNS Lawrence H. Gianella (T-AOT 1125) USNS Allegiance (T-AOT 1201) USNS Mission Capistrano (T-AOT 5005) USNS American Osprey (T-AOT 5074) USNS Mount Washington (T-AOT 5076) USNS Chesapeake (T-AOT 5084)</p>	<p>T-AVB (Aviation Maintenance Logistics Ships)</p> <p>USNS Wright (T-AVB 3) USNS Curtiss (T-AVB 4)</p> <p>T-AKR 5051 (Roll-on/Roll-off Ships)</p>	<p>T-AK (Ready Reserve Force Ships)</p> <p>USNS Northern Light (T-AK 284) USNS Cape Nome (T-AK 1014) USNS Pioneer Commander (T-AK 2016) USNS Pioneer Contractor (T-AK 2018) USNS Gulf Trader (T-AK 2036) USNS Cape Girardeau (T-AK 2039) USNS Gulf Banker (T-AK 2044) USNS Banner (T-AK 5008) USNS Cape Ann (T-AK 5008) USNS Cape Alexander (T-AK 5010) USNS Cape Archway (T-AK 5011) USNS Cape Alava (T-AK 5012) USNS Cape Avinof (T-AK 5013) USNS Lake (T-AK 5016) USNS Scan (T-AK 5018) USNS Courier (T-AK 5019) USNS Cape John (T-AK 5022) USNS Cape Jacob (T-AK 5029) USNS Cape Chalmers (T-AK 5036) USNS Cape Cod (T-AK 5041) USNS Cape Gibson (T-AK 5051) USNS Cape Breton (T-AK 5056) USNS Cape Bover (T-AK 5057) USNS Cape Borda (T-AK 5058) USNS Cape Bon (T-AK 5059) USNS Cape Blanco (T-AK 5060) USNS Cape Catawba (T-AK 5074) USNS Cape Johnson (T-AK 5075) USNS Cape Juby (T-AK 5077)</p>
<p>T-AOT (Afloat Prepositioning Tankers)</p> <p>USNS Potomac (T-AOT 181) USNS Henry J. Kaiser (T-AOT 187) USNS Petersburg (T-AOT 5075)</p>	<p>USNS Comet (T-AKR 7) USNS Meteor (T-AKR 9) USNS Cape Island (T-AKR 10) USNS Cape Intrepid (T-AKR 11) USNS Cape Texas (T-AKR 112) USNS Adm Wm. M. Callaghan (T-AKR 1001) USNS Cape Orlando (T-AKR 2044) USNS Cape Ducato (T-AKR 5051) USNS Cape Douglas (T-AKR 5052) USNS Cape Isabel (T-AKR 5062) USNS Cape May (T-AKR 5063) USNS Cape Mendocino (T-AKR 5064) USNS Cape Mohican (T-AKR 5065) USNS Cape Hudson (T-AKR 5066) USNS Cape Henry (T-AKR 5067) USNS Cape Horn (T-AKR 5068) USNS Cape Edmont (T-AKR 5069) USNS Cape Lambert (T-AKR 5077) USNS Cape Lobos (T-AKR 5078)</p>	

BALLISTIC MISSILE SUBMARINES

Ohio-class

- USS *Ohio* (SSBN 726)
- USS *Michigan* (SSBN 727)
- USS *Florida* (SSBN 728)
- USS *Georgia* (SSBN 729)
- USS *Henry M. Jackson* (SSBN 730)
- USS *Alabama* (SSBN 731)
- USS *Alaska* (SSBN 732)
- USS *Nevada* (SSBN 733)
- USS *Tennessee* (SSBN 734)
- USS *Pennsylvania* (SSBN 735)
- USS *West Virginia* (SSBN 736)
- USS *Kentucky* (SSBN 737)
- USS *Maryland* (SSBN 738)
- USS *Nebraska* (SSBN 739)
- USS *Rhode Island* (SSBN 740)
- USS *Maine* (SSBN 741)
- USS *Wyoming* (SSBN 742)
- USS *Louisiana* (SSBN 743)

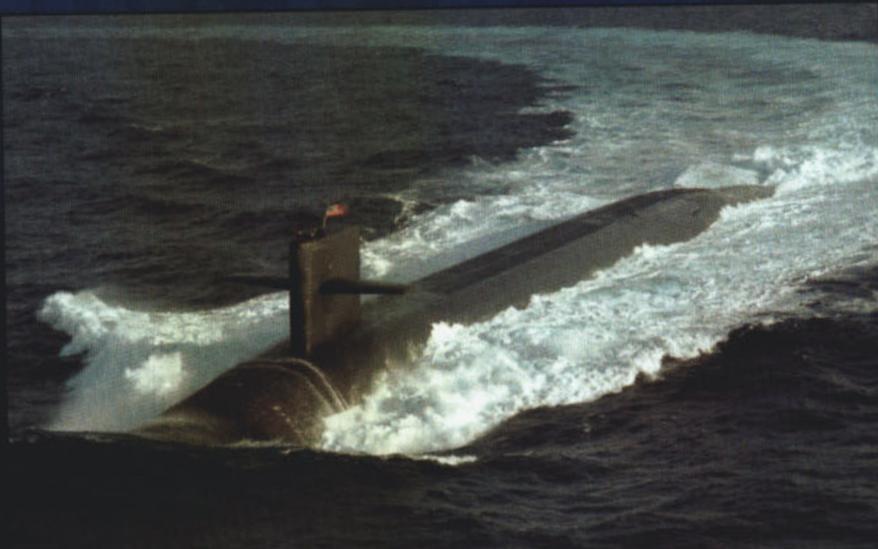


Photo by PFI Michael J. Rinaldi

USS *Maine* (SSBN 741)



U.S. Navy photo

USS *Seawolf* (SSN 21)

DSRV *Avalon*



Photo by PH2 David C. Duncan



USS *Columbus* (SSN 762)



U.S. Navy Photo

Navy Submarines

ATTACK SUBMARINES

Seawolf-class

USS *Seawolf* (SSN 21)
USS *Connecticut* (SSN 22)
USS *Jimmy Carter* (SSN 23)*

Virginia-class

USS *Virginia* (SSN 774)*
USS *Texas* (SSN 775)*

Los Angeles-class

USS *Los Angeles* (SSN 688)
USS *Philadelphia* (SSN 690)
USS *Memphis* (SSN 691)
USS *Bremerton* (SSN 698)
USS *Jacksonville* (SSN 699)
USS *Dallas* (SSN 700)
USS *La Jolla* (SSN 701)
USS *City of Corpus Christi* (SSN 705)
USS *Albuquerque* (SSN 706)
USS *Portsmouth* (SSN 707)
USS *Minneapolis-St. Paul* (SSN 708)
USS *Hyman G. Rickover* (SSN 709)
USS *Augusta* (SSN 710)
USS *San Francisco* (SSN 711)
USS *Houston* (SSN 713)
USS *Norfolk* (SSN 714)
USS *Buffalo* (SSN 715)
USS *Salt Lake City* (SSN 716)
USS *Olympia* (SSN 717)
USS *Honolulu* (SSN 718)
USS *Providence* (SSN 719)
USS *Pittsburgh* (SSN 720)
USS *Chicago* (SSN 721)
USS *Key West* (SSN 722)
USS *Oklahoma City* (SSN 723)
USS *Louisville* (SSN 724)
USS *Helena* (SSN 725)
USS *Newport News* (SSN 750)

USS *San Juan* (SSN 751)
USS *Pasadena* (SSN 752)
USS *Albany* (SSN 753)
USS *Topeka* (SSN 754)
USS *Miami* (SSN 755)
USS *Scranton* (SSN 756)
USS *Alexandria* (SSN 757)
USS *Asheville* (SSN 758)
USS *Jefferson City* (SSN 759)
USS *Annapolis* (SSN 760)
USS *Springfield* (SSN 761)
USS *Columbus* (SSN 762)
USS *Santa Fe* (SSN 763)
USS *Boise* (SSN 764)
USS *Montpelier* (SSN 765)
USS *Charlotte* (SSN 766)
USS *Hampton* (SSN 767)
USS *Hartford* (SSN 768)
USS *Toledo* (SSN 769)
USS *Tucson* (SSN 770)
USS *Columbia* (SSN 771)
USS *Greenville* (SSN 772)
USS *Cheyenne* (SSN 773)

Sturgeon-class

USS *Parche* (SSN 683)
USS *L. Mendel Rivers* (SSN 686)

Benjamin Franklin-class

USS *Kamehameha* (SSN 642)
(ex-SSBN 642)

DEEP SUBMERGENCE VEHICLES

Deep Submergence Rescue Vehicles

DSRV *Mystic*
DSRV *Avalon*

Submersible Research Vehicles

Submarine NR-1 (Nuclear)
USS *Dolphin* (AGSS 555)



*Under Construction

Photo by Pdt. Spike Call

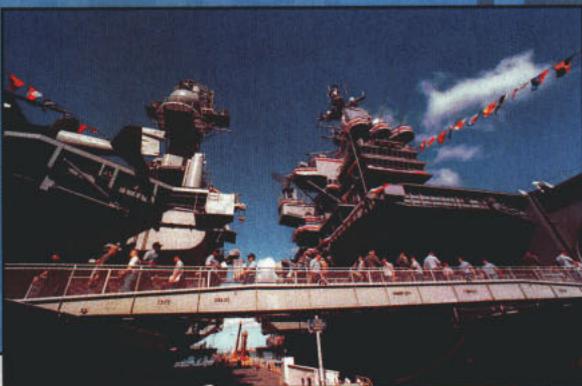


Photo by PH3 Brian Flaska



Photo by PHAW Joseph Strevell



Photo by PH3 Brian Flaska



Photo by PH3 Joseph Hendricks

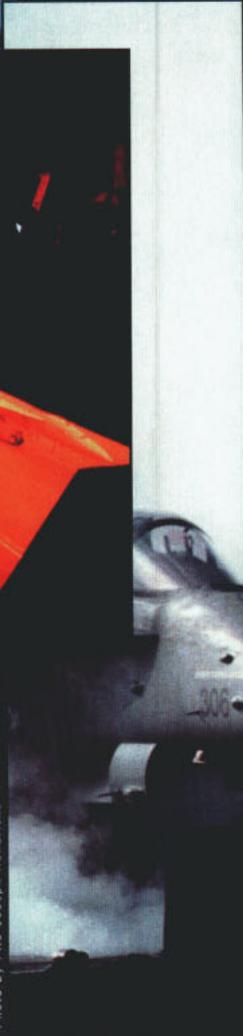


Photo by PH3 Sammy Dallal



Nimitz-class

- USS *Nimitz* (CVN 68)
- USS *Dwight D. Eisenhower* (CVN 69)
- USS *Carl Vinson* (CVN 70)
- USS *Theodore Roosevelt* (CVN 71)
- USS *Abraham Lincoln* (CVN 72)
- USS *George Washington* (CVN 73)
- USS *John C. Stennis* (CVN 74)
- USS *Harry S. Truman* (CVN 75)
- Ronald Reagan (CVN 76)*

Enterprise-class

- USS *Enterprise* (CVN 65)

Kitty Hawk- and John F. Kennedy-classes

- USS *Kitty Hawk* (CV 63)
- USS *Constellation* (CV 64)
- USS *John F. Kennedy* (CV 67)**



Photo by PH3 Matthew L. Peehler





Photo by LT Stephen Kay

F/A-18 HORNET

The F/A-18 is an all-weather, attack aircraft that can also be used as a fighter. In its fighter mode, the F/A-18 is used primarily as an escort and for fleet air defense. In its attack mode, it is used for force projection, interdiction and close air support

WINGSPAN: 37.5 ft.

LENGTH: 56 ft.

HEIGHT: 15 ft., 3.5 in.

SPEED: Mach 1.8+

RANGE: 290 nm

ARMAMENT: 20mm MK-61 *Vulcan* cannon; *Sparrow III* and *Sidewinder* air-to-air missiles; laser-guided and general purpose bombs; *Harpoon* and *HARM*
CREW: 1 or 2

F/A-18E/F SUPER HORNET

The F/A-18E/F will provide the carrier battle group with a strike fighter that has significant growth potential and increased range, endurance and ordnance-carrying capabilities. It will eventually replace the F-14 on carrier decks.

WINGSPAN: 44 ft., 8.5 in.

LENGTH: 60 ft., 1.25 in.

HEIGHT: 16 ft.

WEIGHT: 66,000 lbs. maximum takeoff

SPEED: Mach 1.8+

CEILING: 50,000 ft.

RANGE: 462 nm

ARMAMENT: 20mm MK-61 *Vulcan* cannon; *Sidewinder*, *Sparrow* and *AMRAAM* air-to-air missiles; *Maverick*, *Harpoon*, *Shrike*, *HARM*, *SLAM*, *SLAM-ER*, Joint Standoff Weapon (*JSOW*) and Joint Direct Attack Munition (*JDAM*); *Walleye* and other bombs and rockets
CREW: 1 or 2



Photo by PHAN Christmann

F/A-18 Hornet

Photo by P-13 Brian Fleese



CARRIER-BASED

F-14 TOMCAT

The F-14 is a supersonic, twin-engine, variable sweep-wing fighter designed to attack and destroy enemy aircraft at night and in all weather conditions. The F-14 can track up to 24 targets simultaneously with its advanced weapons control system and engage any of them with one of its six *Phoenix* missiles while continuing to scan the airspace.

WINGSPAN: 64 ft., 1.5 in.

LENGTH: 62 ft., 8 in.

HEIGHT: 16 ft.

WEIGHT: 74,349 lbs. maximum takeoff

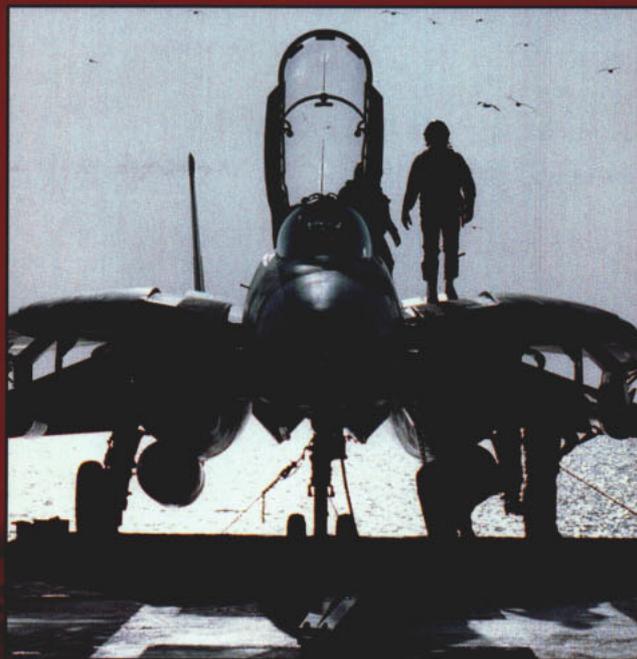
SPEED: Mach 1.88

CEILING: 50,000 ft.

RANGE: 1,600 nm (with external fuel)

ARMAMENT: 20mm MK-61 *Vulcan* cannon; *Sparrow*, *Sidewinder* and *Phoenix* air-to-air missiles; laser-guided and general purpose bombs

CREW: 2 (one pilot, one radar intercept officer)



F-14 Tomcat

Photo by PH3 Joseph Hendricks

EA-6B PROWLER

The EA-6B, a twin-engine, mid-wing aircraft designed for carrier and advanced base operations, is used to provide an umbrella of protection for strike aircraft by jamming enemy radar, electronic data links and communications. The EA-6B is a fully integrated electronic warfare system, combining long-range, all-weather capabilities with advanced electronic countermeasures.

WINGSPAN: 53 ft.

LENGTH: 59 ft., 10 in.

HEIGHT: 16 ft., 3 in.

WEIGHT: 65,000 lbs. maximum takeoff

SPEED: 622 mph

CEILING: 41,200 ft.

COMBAT RANGE: 955 nm

ARMAMENT: *HARM*

CREW: 4 (one pilot, three electronic warfare officers)



U.S. Navy photo



EA-6B Prowler

Navy Aircraft

S-3B Viking



S-3B VIKING

The S-3B, a jet aircraft used for anti-submarine and anti-surface warfare, is extremely versatile and can be equipped for tanking, mining and limited electronic surveillance.

WINGSPAN: 68 ft., 8 in.

LENGTH: 53 ft., 4 in.

HEIGHT: 22 ft., 9 in.

WEIGHT: 52,539 lbs. maximum design gross weight

SPEED: 518 mph

CEILING: more than 35,000 ft.

RANGE: more than 2,000 nm (combat)

ARMAMENT: torpedoes, bombs, *Harpoon* and *Maverick*

CREW: 4 (one pilot, two flight officers and one sensor operator)



C-2A Greyhound

E-2C HAWKEYE

The E-2C is the Navy's all-weather, carrier-based tactical warning and control system aircraft. It provides airborne early warning and command and control functions for the battle group. Additional missions include: surface surveillance coordination, strike and interceptor control, search and rescue guidance and communications relay.

WINGSPAN: 80 ft., 7 in.

LENGTH: 57 ft., 8.75 in.

HEIGHT: 18 ft., 3.75 in.

WEIGHT: 53,288 lbs. maximum takeoff

SPEED: 389 mph

CEILING: 37,000 ft.

RANGE: 1,541 nm (ferry range)

CREW: 5 (two pilots, three mission systems operators)

C-2A Greyhound

The C-2A is the principal aircraft used for COD (carrier on-board delivery) of personnel and materiel. It can deliver a payload of up to 10,000 lbs.

WINGSPAN: 80.5 ft.

LENGTH: 57 ft., 10 in.

HEIGHT: 15 ft., 10.5 in.

WEIGHT: 57,000 lbs. maximum takeoff

SPEED: 310 mph

CEILING: 33,500 ft.

RANGE: more than 1,040 nm (with freight)

CREW: 3 (one pilot, one co-pilot, one flight engineer)

E-2C airborne early warning (AEW)
Hawkeye 2000



U.S. Navy photo

SHORE-BASED

E-6A MERCURY

The E-6A provides secure, survivable, jam-resistant strategic communications while performing the Navy's TACAMO mission.

The E-6B program has been established to upgrade TACAMO operational capabilities and will perform both the TACAMO and airborne command post mission with installed equipment.

WINGSPAN: 148 ft., 2 in.

LENGTH: 152 ft., 11 in.

HEIGHT: 42 ft., 5 in.

WEIGHT: 341,000 lbs. maximum takeoff

SPEED: 523 mph

CEILING: 42,000 ft.

RANGE: 6,400 nm (E-6A);

5,500 nm (E-6B)

CREW: 18 (E-6A); 23 (E-6B)

U.S. Navy Photo



EP-3E Orion

P-3/C Orion/EP-3E Orion (Aries II)

The P-3, a land-based, long-range patrol aircraft, has been in the Navy since the 1960s. Both versions provide multi-mission intelligence, surveillance, reconnaissance and combat capability to theater commanders worldwide.

WINGSPAN: 99 ft., 8 in.

LENGTH: 116 ft., 10 in.

HEIGHT: 33 ft., 8.5 in.

WEIGHT: 146,000 lbs. maximum permissible

SPEED: 473 mph

CEILING: 28,300 ft.

RANGE: 1,346 nm with three hours on station

ARMAMENT: *Harpoon* and *Maverick*; torpedoes; mines

CREW: 10 (three pilots, three flight officers/engineers, three sensor operators, one in-flight technician)

C-9B/DC-9 SKYTRAIN II

The C-9B is used for fleet logistics support and military sealift.

WINGSPAN: 93 ft., 5 in.

LENGTH: 119 ft., 3.5 in.

HEIGHT: 27.5 ft.

WEIGHT: 121,000 lbs. maximum takeoff

SPEED: 575 mph

RANGE: 2,185 nm

CREW: 5 (one pilot, one co-pilot, one crew chief, two attendants and 90 passengers)

ES-3 SHADOW

The ES-3 is a carrier-based, subsonic, all-weather, long-range, jet aircraft used to collect and disseminate tactical reconnaissance information.

WINGSPAN: 68 ft., 8 in.

LENGTH: 53 ft., 4 in.

HEIGHT: 22 ft., 9 in.

WEIGHT: 52,539 lbs. maximum takeoff

SPEED: 500 knots

CEILING: more than 35,000 ft.

RANGE: more than 2,000 nm (combat)

CREW: 4

C-130 HERCULES

The C-130 is probably the most versatile tactical transport aircraft ever built. Its uses have been almost limitless: transport, electronic surveillance, search and rescue, space-capsule recovery, helicopter refueling, gunship and special cargo delivery.

WINGSPAN: 132 ft., 7 in.

LENGTH: 97 ft., 9 in.

HEIGHT: 38 ft., 10 in.

WEIGHT: 175,000 lbs. maximum takeoff

SPEED: 400 mph maximum

CEILING: 28,000 ft.

RANGE: 4,460 nm

CREW: 4 (two pilots, one navigator, one loadmaster)

C-12 HURON

The UC-12B/F/M *Huron* is a utility transport, equipped with high floatation landing gear and tip tanks. The UC-12F and UC-12M models also have hydraulically retractable landing gear.

WINGSPAN: 54 ft., 6 in.

LENGTH: 43 ft., 9 in.

HEIGHT: 15 ft.

WEIGHT: 12,500 lbs. maximum takeoff

SPEED: 298 mph maximum

CEILING: more than 35,000 ft.

RANGE: 1,965 nm

CREW: pilot only (or crew of two side by side)

TRAINERS

T-34C *TURBOMENTOR*

The T-34C is the Navy's aircraft for primary pilot and navigator training. Six training squadrons are equipped with the *Turbomentor*. As of mid-1998, 313 T-34Cs remained in service, along with one NT-34C developmental aircraft. The Raytheon T-6A *Texan* II will replace the T-34C beginning in 2003.

WINGSPAN: 33 ft., 4 in.
LENGTH: 28 ft., 8.5 in.
HEIGHT: 9 ft., 11 in.
WEIGHT: 4,274 lbs. maximum takeoff
SPEED: 288 mph
RANGE: 650 nm
CEILING: more than 30,000 ft.
CREW: 2 (one instructor, one student)

T-45A *GOSHAWK*

The T-45A *Goshawk*, a carrier-capable trainer aircraft, is replacing the T-2C *Buckeye* and TA-4J *Skyhawk* as the Navy's strike trainer. The Navy has 187 T-45s in service.

WINGSPAN: 30 ft., 9.75 in.
LENGTH: 39 ft., 4 in.
HEIGHT: 14 ft.
WEIGHT: 14,081 lbs. maximum takeoff
SPEED: 625 mph
RANGE: 826 nm
CEILING: 40,000 ft.
CREW: 2 (one instructor, one student)

T-2 *BUCKEYE*

The T-2 is a two-seat trainer used to school pilots and flight officers in basic and intermediate strike training.

WINGSPAN: 38 ft., 1.5 in.
LENGTH: 38 ft., 3.5 in.
HEIGHT: 14 ft., 9.5 in.
WEIGHT: 13,179 lbs. maximum takeoff
SPEED: 522 mph
RANGE: 909 nm
CEILING: 40,400 ft.
CREW: 2 (one instructor, one student)

T-44A *PEGASUS*

The T-44A is used to train Navy and Air Force pilots to fly multi-engine, turbo-prop aircraft such as the P-3 and the C-130.
WINGSPAN: 45 ft., 10.75 in.
LENGTH: 39 ft., 9.5 in.
HEIGHT: 15 ft., 1.75 in.
WEIGHT: 10,950 lbs. maximum takeoff
SPEED: 267 mph
RANGE: 960 nm
CEILING: 31,000 ft.
CREW: 2 (one instructor, one student)

TA-4J *SKYHAWK*

The TA-4J two-seat trainer version of the famous A-4 *Skyhawk* attack aircraft serves on in one training squadron and one fleet composite squadron. As of mid-1998, 51 TA-4Js remained in service. The *Skyhawk* is being replaced in the pilot training role by the T-45A/C *Goshawk*.

WINGSPAN: 27 ft., 6 in.
LENGTH: 40 ft., 3.25 in.
HEIGHT: 15 ft.
WEIGHT: 24,500 lbs. maximum takeoff
SPEED: 675 mph
RANGE: 1,785 nm
CREW: 2 (one instructor, one student)

T-39N *SABRELINER*

The seven T-39N *Sabreliners* in service are used to train naval flight officers in radar navigation and airborne radar-intercept procedures. These aircraft, replaced the Cessna T-47A during the early 1990s; the T-47As had replaced earlier T-39Ds in the training role. One T-39D rapid-response airlift *Sabreliner* remained in service as of mid-1998.

WINGSPAN: 44 ft., 5.25 in.
LENGTH: 48 ft., 4 in.
HEIGHT: 16 ft.
WEIGHT: 20,000 lbs. maximum takeoff
SPEED: Mach .8
RANGE: 1,777 nm
CEILING: 27,000 ft.
CREW: 2 (one instructor, one student)

HELICOPTERS

SH/HH-60 *SEAHAWK*

The SH-60E is a twin-engine helicopter used for anti-submarine warfare, search and rescue, drug interdiction, anti-ship warfare, cargo lift and special operations. The SH-60B is an airborne platform based aboard cruisers, destroyers and frigates, that deploys sonobuoys and torpedoes in an anti-submarine role while extending the range of the ship's radar capabilities. The SH-60F is carrier based. The HH-60A is designed to accomplish today's combat search and rescue mission as well as other replenishment and utility functions.

LENGTH: 40 ft., 11 in. (rotors and tail pylon folded)
HEIGHT: 17 ft.
WEIGHT: 21,884 lbs. maximum takeoff
SPEED: 169 mph
RANGE: 380 nm
ARMAMENT: MK46/50 torpedoes (SH-60B/F); 7.62mm or .50-caliber machine guns (SH-60B); *Hellfire* and *Penguin* air-to-surface missiles
CREW: 3 (two pilots, one crewman (SH-60B); or 4 (two pilots, two crewmen (SH-60F).

CH-46 *Sea Knight*

The CH-46D is a tandem-rotor transport helicopter designed for both land- and sea-based operations. It can accommodate 25 passengers or 15 litters, with two medical attendants or 10,000 lbs. of sling-loaded cargo.
LENGTH: 84.3 ft.
HEIGHT: 16.7 ft.
WEIGHT: 23,000 lbs. maximum takeoff
SPEED: 162 mph
CEILING: 10,000 ft.
RANGE: 150 nm
CREW: 3 (two pilots, one crewman)

SH-3 SEA KING

The first version of this workhorse anti-submarine warfare helicopter was flown more than 38 years ago. The H-3's versatility was emphasized during Operation *Desert Shield/Desert Storm* when 36 *Sea Kings*, flying from carriers, logged more than 5,000 hours conducting combat SAR, special operations, maritime interdiction operations, logistics support and mine hunting. The SH-3H has been replaced in the fleet by SH-60F and HH-60H aircraft. The UH-3Hs are programmed to be replaced by the CH-60 version of the Sikorsky *Blackhawk/Seahawk*.
LENGTH: 72 ft., 8 in.
HEIGHT: 16 ft., 10 in.
WEIGHT: 21,000 lbs. maximum takeoff
SPEED: 166 mph
CEILING: 14,700 ft.
RANGE: 542 nm
ARMAMENT: MK46/50 torpedoes, 7.62mm machine guns
CREW: 3 to 4 (two pilots, 1 to 2 crewmen)

Photo by Brian Joseph Strevett



H-3H Sea King



Photo by PM1 Michael Rindler

CH-46 Sea Knight

TH-57 SEA RANGER

The TH-57 *Sea Ranger* is used to train several hundred student naval aviators with 45 TH-57Bs (for primary visual flight rules training) and 71 TH-57Cs (for advanced instrument flight rules training) in two helicopter training squadrons at NAS Whiting Field, Milton, Fla. Two TH-57Cs are configured for RDT&E and are used for photo, chase and utility missions at the Naval Air Warfare Center Aircraft Division at Patuxent River, Md.
LENGTH: 39 ft.
HEIGHT: 10 ft.
WEIGHT: 3,200 lbs. maximum takeoff
SPEED: 138 mph
CEILING: 20,000 ft., pressure altitude
RANGE: 368 nm
CREW: 5 (one pilot, four student pilots)

MH-53E SEA DRAGON

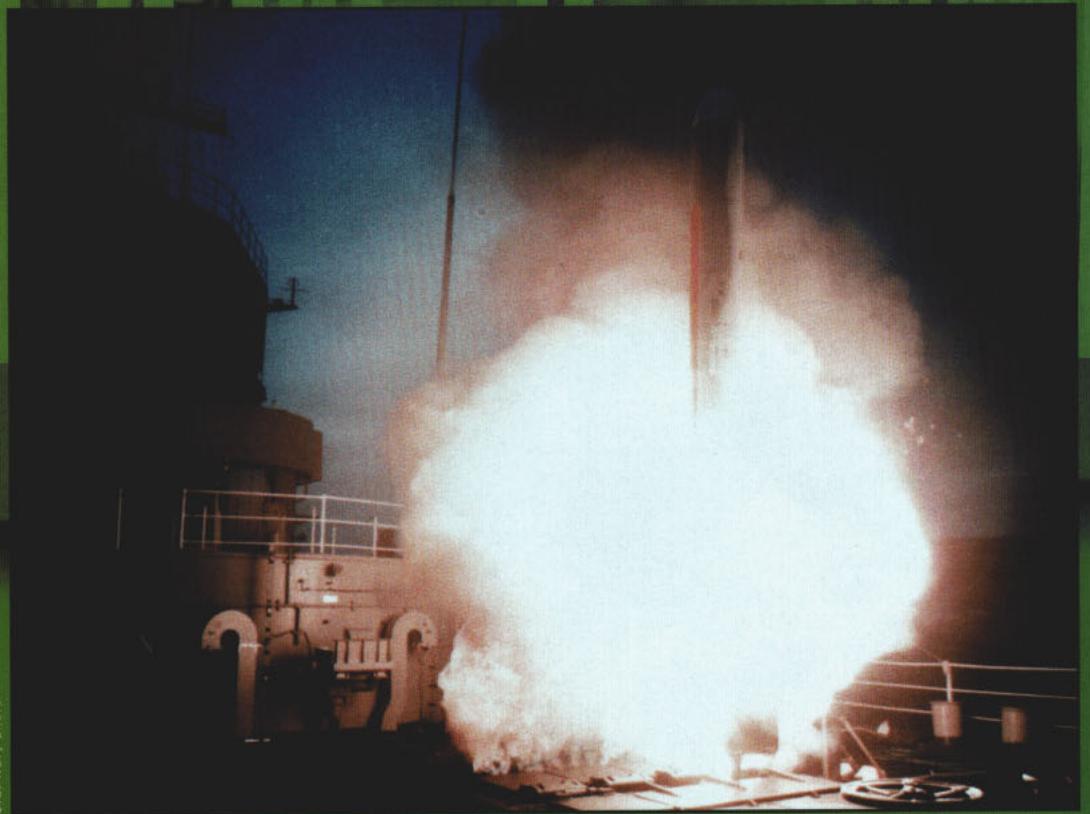
The MH-53E, a mine-countermeasures derivative of the CH-53E Super Stallion, is heavier and has a greater fuel capacity than the Super Stallion. Capable of transporting up to 55 troops, the MH-53E can carry a 16-ton payload 50 nautical miles, or a 10-ton payload 500 nautical miles. In its primary mission of airborne mine countermeasures, the MH-53E is capable of towing a variety of mine-countermeasures systems.
LENGTH: 99 ft. (rotors turning)
HEIGHT: 29 ft., 5 in. (tail rotor turning)
WEIGHT: 73,500 lbs. maximum takeoff
SPEED: 196 mph
CEILING: 18,500 ft.
RANGE: 1,120 nm
CREW: 3 to 8 (two pilots, 1 to 6 crewmen)

SH-2G SEASPRITE

The SH-2G *Seasprite* first flew in 1959 and served long as a utility and search-and-rescue helicopter and later as the first light airborne multipurpose system (LAMPS) helicopter.
LENGTH: 38 ft., 4 in. (nose and blades folded)
HEIGHT: 15 ft., 6 in. (rotors turning)
WEIGHT: 12,800 lbs. normal takeoff
SPEED: 165 mph
CEILING: 22,500 ft.
RANGE: 367 nm
ARMAMENT: MK46/50 torpedoes; 7.62mm machine guns
CREW: 3 (two pilots, one sensor operator)

Information provided by Seapower Magazine, CNO (N88) and NAS Patuxent River, Md.; Jane's All the World's Aircraft, various editions.

As the world's most dominant fighting force, the U.S. Navy employs a wide variety of modern weapons and weapon systems. From missiles to guns to bombs, Sailors are using cutting-edge technology to put ordnance on target.



U.S. Navy photo

Tomahawk

STRATEGIC STRIKE

Trident I (C-4)

The *Trident I* replaced the *Poseidon* in the Navy's ballistic missile inventory. It became operational in 1978 and is carried on *Ohio*-class ballistic missile submarines.

DIMENSIONS: 74 x 408 in.

WEIGHT: 70,000 lbs.

WARHEAD: Eight 100-kT MK 4 MIRV

PROPULSION: Solid-fuel rocket

RANGE: 4,350 nm

MANUFACTURER: Lockheed-Martin

Trident II (D-5)

Larger and with longer range than the *Trident I*, the *Trident II* was first tested aboard a submarine in August 1989 and deployed in 1990.

DIMENSIONS: 83 x 528 in.

WEIGHT: 130,000 lbs.

WARHEAD: Eight to 12 MK 5 RV or 14 150-kT MIRV or 7 300-kT MARV

PROPULSION: Three-stage, solid-fuel rocket

RANGE: 6,000 nm

Manufacturer: Lockheed-Martin

UNGUIDED BOMBS/AIR-LAUNCHED ROCKETS

MK 80 Series

The MK 80 series was developed in the late 1940s and has been the standard for Navy bombs ever since. The Mark (MK) number designates the weight of the bomb. Many other designations (*Paveway, Snakeye, Ballute*) use the standard MK 80 series bombs with guidance system kits to customize them for specific missions and purposes.

MK 81

(250 lbs.; 9 x 76.1 in.)

MK 82

(500 lbs.; 10.8 x 90.9 in.)

MK 83

(1,000 lbs.; 14 x 110.9 in.)

MK 84

(2,000 lbs.; 18 x 154 in.)

STRIKE/ANTI-SURFACE WARFARE (ASUW)

Joint Stand-Off Weapon (JSOW)

Planned to replace the *Paveway*, *Skipper* and *Maverick* laser-guided weapons. Designed as a drop-and-forget weapon to protect delivery aircraft.

DIMENSIONS: 13.26 w x 17.4 h x 160 l; 106 in. wing span

WEIGHT: 1,065 lbs.

WARHEAD: BLU-97 or BLU-108 bomblets

PROPULSION: Unpowered; glide range of 15 nm (low alt.), 40 nm (high alt.); in excess of 120 nm if powered

MANUFACTURER: Raytheon

Harpoon/SLAM/SLAM-ER

The *Harpoon*, *Stand-Off Land*

Attack (SLAM), and *Stand-Off Land Attack - Extended Response*

(*SLAM-ER*) missiles are derivatives from the original *Harpoon*, which was conceived in 1965.

HARPOON: Air, surface/submarine-launched, anti-ship, all-weather cruise missile.

Originally designed as an air-to-surface missile for the P-3 *Orion*, the *Harpoon*, which entered service in 1977, can now be carried by virtually all naval platforms.

Paveway Laser-Guided Bomb

The *Paveway* series was developed to increase the accuracy of laser-guided bombs. All employ standard MK 80 series bombs with *Paveway* kits attached to guide the explosives to their targets. The first of the *Paveway* series entered the fleet in 1968.

DIMENSIONS: 12.6 ft. long - air launched; 15.2 ft. long - surface and submarine launched.

WEIGHT: 1,160 lbs. (air launch), 1,459 lbs. (ASROC launcher), 1,520 lbs. (SAM launcher), 1,523 lbs. (capsule/canister launch)

SPEED: High subsonic speeds
WARHEAD: 488.5 lbs. HE (blast; semi-armor piercing)

HARM (High-Speed Anti-Radar Missile)

The standard anti-radar missile in the U.S. inventory. Used as both a strike-protection and anti-ship weapon. First deployed aboard USS *Kitty Hawk* (CV 63) in January 1984. First used in combat in April 1986 during raids on Libya.

DIMENSIONS: 10m x 13 ft. 7 in. x 44 in. wing span

WEIGHT: 798 lbs.

WARHEAD: 146 lbs.

RANGE: Depends on launch speed/altitude

PROPULSION: Dual-thrust rocket motor (Mach 2+)

MANUFACTURER: Raytheon

Harpoon



U.S. NAVY PHOTO

PROPULSION: Turbojet (cruise) w/solid-fuel booster for ship/submarine launch
RANGE: 75-80 nm for surface-launched; 120 nm for air launched
MANUFACTURER: The Boeing Company

SLAM: A modified *Harpoon* designed for use against land targets. The *SLAM* is an infrared missile used for long-range precision strikes.

DIMENSIONS: 14.6 ft. long
WEIGHT: 1,470 lbs.
SPEED: 120 nm
MANUFACTURER: The Boeing Company

SLAM-ER: The *SLAM-ER* (Expanded Response) is an upgrade that is currently in production. *SLAM-ER* has a greater range (150+ miles), a titanium warhead for increased penetration and software improvements which allow the pilot to retarget the impact point of the missile during the terminal phase of attack (the last five miles).

DIMENSIONS: 14.3 ft. long
WEIGHT: 1,400 lbs.
SPEED: In excess of 150 nm
MANUFACTURER: The Boeing Company

Maverick

The *Maverick* is a short-range, air-to-surface, tactical missile. The version used by the Navy carries a warhead designed to penetrate large, hard targets. First deployed in August 1972.
DIMENSIONS: 8.2 ft. long; 12 in. diameter; 2.4 ft. wing span
WEIGHT: 635 lbs.
WARHEAD: 300 lbs.
PROPULSION: Two-stage, solid-fuel rocket motor
SPEED: Supersonic

RANGE: Approx. 14 nm
MANUFACTURER: Hughes/Raytheon

Tomahawk Cruise Missile

An all-weather, ship- or submarine-launched, cruise missile.

Tomahawks have proven to be highly-survivable weapons due to their low radar detectability and terrain/wave-skimming flight. First deployed in 1986.

DIMENSION: 18.3 ft. long (20.6 ft. with booster); 20.4 in. diameter; 8.9 ft. wing span

WEIGHT: 2,650 lbs. (3,200 lbs. with booster)

WARHEAD: 1,000 lbs. (conventional) or conventional submunitions dispenser with combined-effect bomblets

PROPULSION: Turbojet (cruise); solid-fuel booster (launch)

SPEED: Subsonic

RANGE: 870 nm (land attack/conventional warhead)

MANUFACTURER: General Dynamics

Penguin Anti-ship Missile

The Norwegian-designed and built *Penguin* anti-ship missile is carried aboard Lamps III helicopters. First deployed in 1993.

DIMENSIONS: 10 ft long; 11.2 in. diameter; 39 in. wing span

WEIGHT: 847 lbs.

PROPULSION: Solid-fuel rocket motor/solid-fuel booster

WARHEAD: 265 lbs., semi-armor piercing

RANGE: 25 nm

SPEED: Mach 1.2

MANUFACTURER: Kongsberg Vaapenfabrikk (Norway)



Maverick Missile

ANTI-AIR WARFARE (AAW)

Aircraft Guns

M61A1

This 20mm Gatling gun, which also forms the basis for the *Phalanx* Close-In Weapons System (see "Anti-aircraft Warfare" section), is mounted aboard the F/A-18 *Hornet* and F-14 *Tomcat*.

CALIBER: 20mm//62

MUZZLE VELOCITY: 3,400 ft./sec.

RATE OF FIRE: 4,000 or 6,000 rounds/min.

WEIGHT: 841 lbs. total (gun, feed system, ammunition)

MANUFACTURER: General Electric

Surface-to-Air Missiles

ROLLING AIRFRAME MISSILE (RAM)

Developed jointly with the Federal Republic of Germany, RAM provides ships with a low-cost, self-defense system against anti-ship missiles.

DIMENSIONS: 9.25 ft. long; 5 in. diameter; 1.5 ft. wing span

WEIGHT: 162 lbs.

WARHEAD: 25 lbs.

PROPULSION: Solid-fuel rocket

RANGE: 5 nm

SPEED: Supersonic

MANUFACTURER: Raytheon

SEA SPARROW

See *Sparrow* in the Air-to-Air section below.

STANDARD MISSILE-1 (SM-1)/

STANDARD MISSILE-2 (SM-2)

Designed as a surface-to-air and surface-to-surface missile, the *Standard* Missile is currently employed in two variations: SM-1/SM-2 MR (medium range) and SM-2 ER (Extended Range). The first *Standard* Missile entered the fleet in 1970. The SM-2 ER arrived in 1981.

SM-1/SM-2 MR

DIMENSIONS: 14.7 ft long; 13.5 in. diameter; 3.6 ft. wing span

WEIGHT: 1,100 lbs. (SM-1); 1,380 lbs. (SM-2)

WARHEAD: Proximity fuse/high-explosive

PROPULSION: Dual thrust/solid-fuel rocket

RANGE: 15 to 20 nm (SM-1); 40 to 90 nm (SM-2 MR)

MANUFACTURER: Raytheon

SM-2 ER

DIMENSIONS: 26.2 ft long; 13.5 in. diameter; 5.2 ft. wing span

WEIGHT: 2,980 lbs.

WARHEAD: Proximity fuse/high-explosive

PROPULSION: Two-stage/solid-fuel rocket; sustainer motor and booster motor

RANGE: 65 to 100 nm

Manufacturer: Raytheon

Air-to-Air Missiles

ADVANCED, MEDIUM-RANGE, AIR-TO-AIR MISSILE

(AMRAAM) An all-weather, beyond-visual-range, air-to-air missile designed as a follow-on to the *Sparrow* missile series. Less dependent on the aircraft's fire control system for guidance, the missile frees the pilot to aim and fire multiple missiles while evading enemy fire.

The AMRAAM program is the result of a joint agreement between the U.S. and its NATO allies to develop and

SHIPBOARD GUNS

Mark 45 - 5-inch/54-caliber lightweight gun

This 54-caliber, lightweight gun provides surface combatants accurate naval gunfire against fast, highly-maneuverable, surface targets, air threats and shore batteries during amphibious operations.

CALIBER: 5-inch/54 caliber

SHELL WEIGHT: 70 lbs.

FIRING RATE: 20 rounds per minute

MUZZLE VELOCITY: 2,650 ft./sec

RANGE: 13 nm

MAGAZINE CAPACITY: 475 to 500 rounds

WEIGHT: 47,820 lbs.

Mark 38 - 25 mm machine gun system

The naval version of the Army Bushmaster, or "Chain Gun." This single-barrel, air-cooled, heavy machine gun meets the needs of ships throughout the fleet, especially those operating in the Arabian Gulf.

CALIBER: 25mm/87

ROUND WEIGHT: 1.1 lbs.

MUZZLE VELOCITY: 1,100 m/sec

RANGE: 2,700 yds.

TYPE OF FIRE: Single shot; 175

rounds/min. in automatic

MANUFACTURER: Crane Division, Naval Surface Warfare Center

Mark 75 - 76mm/62 caliber 3-inch gun

Best suited for use aboard smaller combat vessels, the Mark 75 features rapid fire capability with low manning requirements. The gun was approved for fleet use in 1975 and was first deployed aboard USS *Oliver Hazard Perry* (FFG 7) in 1978.

CALIBER: 3-inch/62

RATE OF FIRE: 85 rounds/min.

MUZZLE VELOCITY: 925 m/sec

RANGE: 10 nm

WEIGHT: 7.35 tons

MANUFACTURER: FMC Naval Systems Division and OTO Melara

share production technology. The AMRAAM was deployed in September 1991 and deployed aboard the F-14 *Tomcat* and F/A-18 *Hornet*.

DIMENSIONS: 12 ft. (long); 7 in.

diameter; 21 in. wing span

WEIGHT: 335 lbs.

PROPULSION: High performance, directed rocket motor

WARHEAD: Blast fragmentation; high explosive

SPEED: Supersonic

MANUFACTURER: Hughes/ Raytheon

Phoenix Missile

The Navy's only long-range, air-to-air missile. The missile has been designed for use in an all-weather, heavy-jamming environment. First deployed in 1974.

DIMENSIONS: 13 ft. long; 15 in.

diameter; 3 ft. wing span

WEIGHT: 1,024 lbs.

PROPULSION: Solid-fuel rocket motor

WARHEAD: 135 lbs.; proximity fuse, high explosive

RANGE: In excess of 100 nm

SPEED: In excess of 3,000 mph

MANUFACTURER: Hughes/ Raytheon

Sparrow

A highly-maneuverable, all-weather, all-altitude, air-to-air missile found throughout the U.S. and NATO forces. A surface ship version, the *Sea Sparrow*, provides U.S. Navy and NATO ships with an effective, anti-air weapon. First deployed in 1976. Carried on F-14 *Tomcat* and F/A-18 *Hornet* aircraft.

DIMENSIONS: 12 ft. long; 8 in.

diameter; 3.4 ft. wing span

WEIGHT: 500 lbs.

WARHEAD: 90 lbs. annular blast fragmentation

PROPULSION: Solid-fuel rocket motor

RANGE: In excess of 30 nm

SPEED: In excess of 2,660 mph

MANUFACTURER:

Raytheon/General Dynamics

Sidewinder

The *Sidewinder* is a short-range, heat-seeking, anti-air missile carried by fighter aircraft. The missile's high-explosive warhead and infrared, heat-seeking guidance system have contributed to the program's long life. The first prototype was fired successfully in 1953 and the initial production version became operational in 1956. The current version, AIM-9M, began fleet use in 1983. The *Sidewinder* is one of the oldest, least-expensive and most-successful missiles in the entire U.S. inventory.

DIMENSIONS: 9.6 ft. long; 5 in.

diameter; 2.1 ft. fin span

WEIGHT: 190 lbs.

PROPULSION: Single-stage, solid-fuel rocket motor

WARHEAD: 20.8 blast fragmentation

SPEED: Supersonic

RANGE: 8.7-plus nm

MANUFACTURER: Raytheon/Ford Aerospace/Loral

Phalanx Close-In Weapons System (CIWS)

The *Phalanx* CIWS combines a 20mm Gatling gun with search and tracking radar to provide surface ships with terminal defense against anti-ship missiles. The system underwent operational tests and evaluation on board USS *Bigelow* (DD 942) in 1977 and went into production in 1978 with the first systems installed aboard USS *Coral Sea* (CV 43) in 1980. The original versions used rounds made from depleted uranium that have since been replaced by tungsten rounds.

CALIBER: 20mm/53

RATE OF FIRE: 1,000-3,000 rounds/min.

MUZZLE VELOCITY: 3,650 ft./sec

RANGE: 6,000 yds.

MANUFACTURER: Hughes Missile Systems Company

60mm Mortar

Often combined with the M60 machine gun, the 60mm mortar is used aboard patrol boats (PBs).

CALIBER: 60mm

RATE OF FIRE: 10 rounds/min.

(trigger mode); 18 rounds/min.

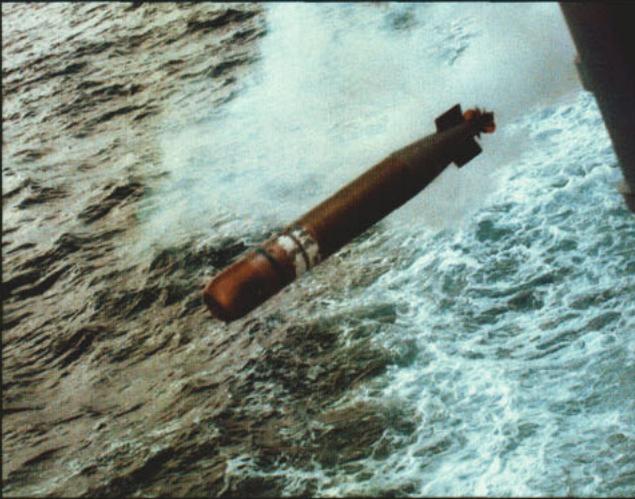
(drop mode)

MUZZLE VELOCITY: 500 ft./sec

RANGE: 1,850 to 2,000 yds.



Phalanx Close-In Weapons System



U.S. Navy photo

ANTI-SUBMARINE WARFARE (ASW)

Torpedoes

MK 46

The MK-46 torpedo is designed to be launched from surface combatants, ASROC missile launchers and fixed- and rotary-wing aircraft. In 1989, a major upgrade program began to enhance the performance of the MK-46 Mod 5 in shallow water. The original version was deployed in 1966. The current modification entered the fleet in 1979.

DIMENSIONS: 8.5 ft long; 12.75 in. diameter

WEIGHT: 517.65 lbs.

RANGE: 8,000 yds.

SPEED: 45 kTs

PROPULSION: Two-speed, reciprocating external combustion

WARHEAD: 96 lbs. of H-6

DEPTH: Greater than 1,200 ft.

MANUFACTURER: Alliant Techsystems

MK 48/ADCAP

The MK-48 is designed to combat fast, deep-diving, nuclear submarines and high-performance, surface ships. It's carried aboard all Navy sub-

marines. The improved version, MK-48 ADCAP, is carried by *Los Angeles-* and *Seawolf-*class attack submarines and *Ohio-*class ballistic missile submarines.

The MK-48 has been in use by the U.S. Navy since 1972. MK-48 ADCAP became operational in 1988 and was approved for full production a year later.

DIMENSIONS: 19 ft long; 21 in. diameter

WEIGHT: 3,434 lbs. (MK 48); 3,695 (MK 48 ADCAP)

PROPULSION: Piston engine/pump jet

RANGE: Greater than 8 nm

SPEED: Greater than 28 kTs

DEPTH: Greater than 1,200 ft.

WARHEAD: 650 lbs. high explosive

MANUFACTURER: Gould

MK 50

The MK-50 is an advanced lightweight torpedo for use against the faster, deeper-diving and more-sophisticated submarines.

The MK-50 can be launched from all ASW aircraft, and from torpedo tubes aboard surface combatants. The MK-50 will

eventually replace the MK-46 as the fleet's lightweight torpedo.

DIMENSIONS: 9.3 ft long; 12.75 in. diameter

WEIGHT: 750 lbs.

PROPULSION: Stored Chemical Energy Propulsion System

RANGE: In excess of 14,000 yds.

SPEED: In excess of 40 kTs

DEPTH: 3,600 ft.

WARHEAD: Approx. 100 lbs. high explosive

MANUFACTURER: Alliant Techsystems, Westinghouse

Mines

MK67 SLMM (SUBMARINE LAUNCHED MOBILE MINE)

Based on the MK 37 torpedo, the SLMM is a submarine-deployed mine used for covert mining in hostile environments. The MK 67 began active service in 1983.

TYPE: Submarine laid bottom mine.

DIMENSIONS: 13.4 ft. long; 19 in. diameter

DETECTION SYSTEM:

Magnetic/seismic or

Magnetic/seismic/pressure

target detection devices (TDDs)

DEPTH RANGE: Up to 600 ft.

(183 meters)



Photo by PH3 Timothy S. Smith

A SH-60 *Seahawk* helicopter from the *Dusty Dogs* Anti-Submarine Squadron Seven (HS-7) hovers 200 feet off the water while a mine explodes during a controlled Mine Explosion Exercise (MINEX) in the Persian Gulf.

WEIGHT: 1,658 pounds (754 kilograms)
EXPLOSIVES: 515 pounds (234 kilograms) of PBXN-103 high explosives.

MK 65 QUICKSTRIKE

The *Quickstike* is a shallow-water, aircraft-laid mine used primarily against surface ships. The MK 65 is a 2,390 lb. bomb fitted with a thin-walled mine casing. Older *Quickstrike* versions (MK 62, MK 63 and MK 64) were converted streamlined bombs of the 500 lb., 1,000 lb. and 2,000 lb. sizes. First fleet service in 1983.

TYPE: Aircraft laid bottom mine.
DIMENSIONS: 10.6 ft. long; 29 in. diameter
DETECTION SYSTEM: Magnetic/seismic/pressure target detection devices (TDDs) are used on various models.
DEPTH RANGE: Up to 600 ft. (183 meters)
WEIGHT: 2,390 pounds (1,086 kilograms)
EXPLOSIVES: Various loads

MK 60 CAPTOR

The *Captor* is the Navy's primary, anti-submarine weapon. This deep-water mine is designed to be laid by aircraft or submarines and is anchored to the ocean floor. Its acoustic detection system is designed to seek hostile submarines, while ignoring surface craft. Upon detection of a hostile submarine, the *Captor* launches an MK 46 Mod 4 or Mod 6 torpedo. First fleet use in 1979.

TYPE: Aircraft, ship or submarine-laid, magnetically-moored mine.
DIMENSIONS: Aircraft/Ship laid: 12 ft. long/21 in. diameter; Submarine laid: 11 ft. long/21 in. diameter
DETECTION SYSTEM: Reliable acoustic path (RAP) sound propagation.
DEPTH RANGE: Up to 3,000 ft.
WEIGHT: Air/Ship laid: 2,370 pounds; submarine laid: 2,056 pounds
EXPLOSIVES: 96 pounds of PBXN 103 high explosive MK 46 torpedo.

MK 56 AND MK 57

The MK56 ASW mine (the oldest still in use) was developed in 1966.

TYPE: Aircraft-laid, moored mine (MK 56); submarine-laid, magnetically-moored mine (MK 57).
DIMENSIONS: (MK 56) 9.5 ft. long, 22.4 in. diameter; (MK 57) 10 ft. long, 21 in. diameter
DETECTION SYSTEM: Total field magnetic exploder.
DEPTH RANGE: Up to 1,000 ft.
WEIGHT: MK 56: 2,000 pounds; MK 57: 2,059 pounds
EXPLOSIVES: MK 56: 360 pounds HBX-3; MK 57: 340 pounds HBX 3

SOURCES: *Naval Sea Systems Command, Naval Air Systems Command, The U.S. Naval Institute Guide to World Naval Weapons Systems, 1997-1998*



Monthly Basic Pay Table

Effective January 1, 2000

PAY GRADE	YEARS OF SERVICE														
	<2	2	3	4	6	8	10	12	14	16	18	20	22	24	26
Commissioned Officers															
0-10	8214.90	8503.80	8503.80	8503.80	8503.80	8830.20	8830.20	9319.50	9319.50	9986.40	9986.40	10655.01	0655.10	10655.10	11318.40
0-9	7280.70	7471.50	7630.50	7630.50	7630.50	7824.60	7824.60	8150.10	8150.10	8830.20	8830.20	9319.50	9319.50	9319.50	9986.40
0-8	6594.30	6792.30	6953.10	6953.10	6953.10	7471.50	7471.50	7824.60	7824.60	8150.10	8503.80	8830.20	9048.00	9048.00	9048.00
0-7	5479.50	5851.80	5851.80	5851.80	6114.60	6114.60	6468.90	6468.90	6792.30	7471.50	7985.40	7985.40	7985.40	7985.40	7985.40
0-6	4061.10	4461.60	4754.40	4754.40	4754.40	4754.40	4754.40	4754.40	4916.10	5693.10	5983.80	6114.60	6468.90	6687.30	7015.50
0-5	3248.40	3813.90	4077.90	4077.90	4077.90	4077.90	4200.30	4427.10	4723.80	5077.50	5368.20	5531.10	5724.60	5724.60	5724.60
0-4	2737.80	3333.90	3556.20	3556.20	3622.20	3781.80	4040.40	4267.50	4461.60	4658.10	4785.90	4785.90	4785.90	4785.90	4785.90
0-3	2544.00	2844.30	3041.10	3364.80	3525.90	3652.20	3850.20	4040.40	4139.10	4139.10	4139.10	4139.10	4139.10	4139.10	4139.10
0-2	2218.80	2423.10	2910.90	3009.00	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10	3071.10
0-1	1926.30	2004.90	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10	2423.10
Commissioned Officers with over 4 years active duty service as an enlisted member or warrant officer															
0-3E	0.00	0.00	0.00	3364.80	3525.90	3652.20	3850.20	4040.40	4200.30	4200.30	4200.30	4200.30	4200.30	4200.30	4200.30
0-2E	0.00	0.00	0.00	3009.00	3071.10	3168.60	3333.90	3461.40	3556.20	3556.20	3556.20	3556.20	3556.20	3556.20	3556.20
0-1E	0.00	0.00	0.00	2423.10	2588.40	2683.80	2781.30	2877.60	3009.00	3009.00	3009.00	3009.00	3009.00	3009.00	3009.00
Warrant Officers															
W-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4423.80	4591.20	4724.10	4923.30
W-4	2592.00	2781.30	2781.30	2844.30	2974.20	3105.00	3235.50	3461.40	3622.20	3749.40	3850.20	3974.10	4107.00	4235.10	4427.10
W-3	2355.90	2555.40	2555.40	2588.40	2618.70	2810.40	2974.20	3071.10	3168.60	3263.40	3364.80	3495.90	3622.20	3622.20	3749.40
W-2	2063.40	2232.60	2232.60	2297.40	2423.10	2555.40	2652.60	2749.80	2844.30	2944.50	3041.10	3136.80	3263.40	3263.40	3263.40
W-1	1719.00	1971.00	1971.00	2135.70	2232.60	2328.00	2423.10	2522.70	2618.70	2716.20	2810.40	2910.90	2910.90	2910.90	2910.90
Enlisted Members															
E-9*	0.00	0.00	0.00	0.00	0.00	0.00	3015.30	3083.40	3152.70	3225.60	3298.20	3361.50	3537.90	3675.60	3882.60
E-8	0.00	0.00	0.00	0.00	0.00	2528.40	2601.60	2669.70	2739.00	2811.60	2875.50	2946.30	3119.40	3258.00	3467.10
E-7	1765.80	1906.20	1976.10	2045.70	2115.60	2182.80	2252.70	2323.20	2427.90	2496.90	2566.20	2599.50	2774.40	2912.40	3119.40
E-6	1518.90	1655.70	1724.40	1797.60	1865.40	1932.60	2003.40	2106.60	2172.90	2242.80	2277.00	2277.00	2277.00	2277.00	2277.00
E-5	1332.60	1450.50	1521.00	1587.30	1691.70	1761.00	1830.00	1898.10	1932.60	1932.60	1932.60	1932.60	1932.60	1932.60	1932.60
E-4	1242.90	1312.80	1390.20	1497.30	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70	1556.70
E-3	1171.50	1235.70	1284.60	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90	1335.90
E-2	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40	1127.40
E-1>4	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60	1005.60
E-1<4	930.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Basic Pay for 0-7—0-10 is limited to Level III of the Executive Schedule. Basic Pay for 0-6 and below is limited to Level V of the Executive Schedule.
 *While serving as a Senior Enlisted Advisor for the services, the base pay is \$4,719.00 per month.

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